

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

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Docket No. EP 711 (Sub-No. 1)

RECIPROCAL SWITCHING

**OPENING COMMENTS AND EVIDENCE
OF UNION PACIFIC RAILROAD COMPANY**

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Union Pacific Railroad Company submits these comments in response to the Notice of Proposed Rulemaking served July 27, 2016 (“NPRM”).¹ Union Pacific also joins in the comments submitted by the Association of American Railroads.

I. INTRODUCTION AND SUMMARY

In the NPRM, the Board proposes to restructure the freight rail industry by promoting the use of forced reciprocal switching on routes where railroads would otherwise provide single-line service. It proposes this dramatic expansion of government intervention in rail operations despite congressional directives to limit regulatory intervention to situations involving market failure. In the decades following the Staggers Act’s enactment, the Interstate Commerce Commission and the Board adopted and applied policies that recognized Congress’s intent to allow market forces to determine the rail industry’s structure, while providing remedies to address anticompetitive conduct and unreasonably high rates. These policies helped revive an industry that was nearly destroyed by regulation. The Board’s new proposal advances a very different approach, under which regulators would have broad discretion to override market outcomes. The Board could

¹ The Board extended the deadline for comments in a decision served September 1, 2016.

intervene whenever it decides that “the potential benefits . . . outweigh the potential detriments,” NPRM at 18, or that intermodal and intramodal competition are “not effective,” *id.* at 19. Forced switching would not be a remedy for unlawful acts, but a means to restructure the rail industry. The Board’s proposal disregards congressional intent and violates statutory limits on the agency’s authority.

The Board’s new approach would reverse regulatory policies that Union Pacific relied on over many years as it rationalized its network, eliminated inefficient routes and interchanges, and provided more shippers² with the benefits of single-line service—benefits the ICC and the Board repeatedly endorsed. Union Pacific has invested billions of dollars in its network to achieve these ends. These were market-driven investments, made in response to shipper demands for more and better service. Union Pacific coordinated its investments and transportation plans to concentrate traffic on higher-density corridors, in order to move more traffic using fewer, larger trains, with fewer work events. The changes allow Union Pacific to make more productive use of its tracks, yards, locomotives, and crews, and to achieve better utilization of private and railroad-owned cars. Reducing work events also reduces safety risks, delay, and service failures.

If implemented, the Board’s proposal would return the rail industry to its Balkanized past, risking the repetition of failures that plagued the rail industry in earlier years. Each and every shipment via forced switching would need additional handling. Each and every affected car would need more time to move from origin to destination and back for reloading. The new switching operations would drive down service levels and increase costs, making the network less efficient and less responsive to customer demands. In addition, changes in traffic patterns

² We use the term “shippers” to refer to both shippers and receivers.

resulting from forced switching would disrupt the transportation plans railroads use to move trains longer distances without stopping for work events. The need for more work events and more cars to compensate for slower service would increase the demands on yard capacity. But Union Pacific and other railroads eliminated or repurposed many older yards as consolidations and efficient transportation plans allowed them to reduce work events. In many cases, railroads could not reproduce the lost yard capacity. Even if they could, they would have little incentive to invest in facilities that would be used to switch cars for competitors. They also would have fewer resources to pay for such facilities if forced switching reduced their returns through diminished traffic or a diminished ability to engage in differential pricing. The resulting increases in yard congestion and reductions in network velocity would degrade service to all shippers, not just those that invoke forced switching. The Board is well aware of how even local service problems can spread across the rail network and how long the network takes to recover. *See* NPRM at 17.

If the Board recognizes the very significant consequences of its proposal, that is not apparent from the NPRM. The Board lists the factors that led it to revisit its forced switching policy. It does not, however, explain how those factors justify the proposed policy change, much less address railroads' good-faith reliance on the agency's longstanding policies favoring single-line service. The Board reviews its legal authority to revise its forced switching rules at an abstract level. It does not, however, address whether its particular proposal is lawful. The Board acknowledges the need to weigh and balance the effects of its proposal on the rail transportation policy factors enumerated in 49 U.S.C. § 10101, but it performs no weighing or balancing. It does not explain how a restructuring of rail networks and operations through increased forced switching, with the associated prospects of reduced differential pricing and Board-determined access prices, would accord with congressional policies:

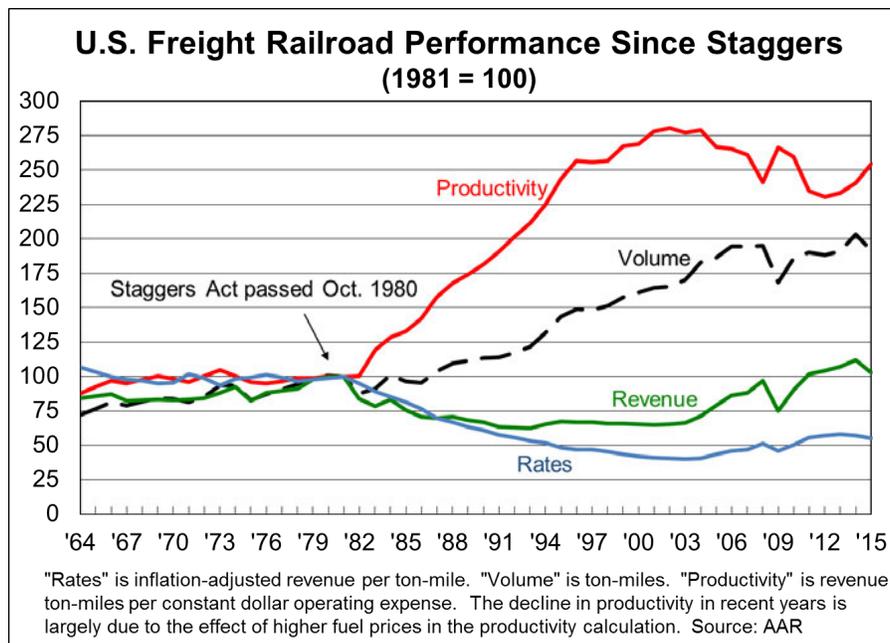
- “to allow, to the maximum extent possible, competition and the demand for services to establish reasonable rates for transportation by rail,” 49 U.S.C. § 10101(1);
- “to minimize the need for Federal regulatory control over the rail transportation system,” *id.* § 10101(2);
- “to promote a safe and efficient rail transportation system by allowing rail carriers to earn adequate revenues,” *id.* § 10101(3);
- “to ensure the development and continuation of a sound rail transportation system,” *id.* § 10101(4);
- “to foster sound economic conditions in transportation,” *id.* § 10101(5);
- “to operate transportation facilities and equipment without detriment to the public health and safety,” *id.* § 10101(8);
- “to encourage honest and efficient management of railroads,” *id.* § 10101(9);
- “to encourage . . . safe and suitable working conditions in the railroad industry,” *id.* § 10101(11); and
- “to encourage and promote energy conservation,” *id.* § 10101(14).

The impacts of the Board’s proposal cannot be quantified with certainty, but there is no doubt that they would be both harmful and substantial. The Board’s plan to undertake an open-ended, case-by-case balancing of forced switching’s potential benefits and detriments renders the outcome of any individual case unpredictable and makes it impossible to evaluate the proposal’s cumulative effects with precision. However, we know that the Board expects the proposed rules to result in more forced switching. The Board says they are intended “to promote further use” of forced switching. NPRM at 16. We also know that shippers would use forced switching to obtain lower rates, not improved service—additional switching would inevitably increase their car cycle times and reduce service reliability. And we know that shippers that use forced switching would impose the costs of their decisions on our other customers and on our network by reducing our ability to provide safe, reliable, and efficient service.

Moreover, we know that the proposed rules will result in less capital investment. We cannot justify continuing our current high level of investment in light of the prospect that reduced volume, rate compression, and higher operating costs will drive down our returns. Forced switching would make it increasingly difficult to predict how much traffic would move over which lines, yards, and interchanges, discouraging investment in such facilities. Projected revenue gains and cost savings from potential investments would have to be discounted to reflect the increased uncertainty, reducing expected returns and making at least some socially beneficial investments unattractive. In the end, the effects will fall most heavily on those that depend the most on the rail network.

Some shippers may be so narrowly focused on short-term rate reductions that they are willing to overlook the broader, harmful, long-term consequences of forced switching. But there is no justification for changing federal rail transportation policies to take the rail industry in the opposite direction from the one that has worked so well for the past three decades (see Figure 1).

Figure 1: Post-Staggers Improvements



The remaining Parts of these comments cover the following subjects:

- **Part II** places the Board’s proposal in historical context. It explains that implementation of the proposal would reverse decades of policies that allowed and encouraged Union Pacific to respond to shipper demands for more and better service by designing its network and transportation plans to provide efficient, single-line service.
- **Part III** addresses the legal shortcomings in the Board’s proposal. It discusses the absence of both a reasoned justification for reversing the current forced switching policy and a reasoned analysis of the consequences of doing so, as well as the Board’s disregard of the statutory requirement that proponents of forced switching establish a need for regulatory intervention.
- **Part IV** explains why the Board’s current forced switching policy is in the public interest and why forced access is broadly disfavored as a matter of competition policy.
- **Part V** discusses the substantial disruption of Union Pacific’s operations that would result from introducing new forced switching operations.
- **Part VI** explains why implementation of the Board’s proposal would cause Union Pacific to reduce capital investment in its network.
- **Part VII** addresses two issues on which the Board specifically sought comments: access pricing and what should constitute a “reasonable distance” from a “working interchange.”

Union Pacific’s comments are supported by verified statements from the following

witnesses:

- **Thomas C. Haley**, Union Pacific’s Vice President – Network Planning and Operations (“Haley VS”). Mr. Haley explains how the increased use of forced switching would undermine Union Pacific’s service design and capital planning, degrade Union Pacific’s service and efficiency, and reduce Union Pacific’s ability to plan and manage operations.

- **Jon T. Panzer**, Union Pacific’s Vice President – Financial Planning Analysis (“Panzer VS”). Mr. Panzer describes Union Pacific’s capital budgeting process, discusses the challenges of meeting Union Pacific’s current and future demand for capital spending, and explains why implementation of the Board’s proposal would force Union Pacific to reduce capital investment.
- **Kevin M. Murphy**, the George J. Stigler Distinguished Service Professor of Economics in the Booth School of Business and the Department of Economics at The University of Chicago (“Murphy VS”). Professor Murphy describes the economic principles that apply when evaluating a proposal like the Board’s forced switching proposal and discusses the harmful economic consequences of adopting the Board’s proposal.
- **Joshua D. Wright**, University Professor at the Antonin Scalia Law School at George Mason University and a former Commissioner of the Federal Trade Commission (“Wright VS”). Professor Wright explains why forced access is disfavored as a matter of economic regulation and policy. He also discusses the general properties of an efficient rule for access pricing.

In addition, in Appendices A, B, and C to these comments, Union Pacific is submitting verified statements and comments addressing the impact of forced access on railroad operations and investment that it previously filed in STB Docket No. EP 705, *Competition in the Railroad Industry*, and STB Docket No. EP 711, *Petition for Rulemaking to Adopt Revised Competitive Switching Rules*, to make those materials part of the administrative record in this proceeding.

II. THE BOARD’S PROPOSAL WOULD REVERSE THE POLICIES ON WHICH UNION PACIFIC RELIED IN RESTRUCTURING ITS NETWORK AND IMPROVING SERVICE TO CUSTOMERS.

The Board’s proposal to promote the use of forced switching repudiates—retroactively—a powerful public policy reflected in a series of agency decisions that restructured the U.S. rail network and that delivered enormous benefits to the shipping public. Today’s railroad network, including the Union Pacific system, is the direct result of ICC and Board decisions favoring single-line service in preference to a Balkanized rail system that relies heavily on hand-offs to other railroads. The ICC and the Board emphatically and correctly embraced that policy in a set of decisions from 1980 through 1999 that approved railroad consolidations proposals and endorsed the single-line service benefits they promised and subsequently delivered. The agency

reinforced its policy favoring single-line service by eliminating use of “DT&I” traffic protective conditions, which had required merging railroads to “maintain and keep open all routes and channels of trade via existing junctions and gateways,” thus freeing railroads to “rationalize their route structures making maximum use of efficient routings and eliminating others.”

Interchange Provisions at Jacksonville, FL, SCL & SRS, 365 I.C.C. 905, 908, 916 (1982) (quoting DT&I Condition 1).³

The railroads and their investors relied on those decisions, completely revamping the U.S. rail map, eliminating widespread inefficiencies associated with interchanges, and saving shippers billions upon billions of dollars by developing today’s integrated rail systems.

Expanding the use of forced switching would reintroduce the inefficiencies that agency decisions empowered the railroads to eliminate, and would endanger safety, investment, and customer service. Union Pacific and other railroads have invested tens of billions of dollars in reliance on agency decisions that allowed them to expand single-line service. They physically reconfigured their systems, building new capacity to handle the changed, more efficient traffic flows, while eliminating unneeded yards and interchange facilities. In many places, that capacity could not be replaced today—even if railroads wanted to invest in capacity that would benefit a competitor—because cities and towns have occupied the properties, and neighbors would object. The railroads also developed and refined their transportation plans to use their reconfigured infrastructure to reduce work events and to increase network velocity, fluidity, and reliability.

³ “DT&I” traffic protective conditions were developed in *Detroit, T. & I. R. Co. Control*, 275 I.C.C. 455 (1950), and were subsequently imposed almost automatically in every rail merger proceeding until 1980, when the ICC began to recognize that they were anticompetitive and contrary to the public interest. See *Traffic Protective Conditions*, 366 I.C.C. 112 (1982).

Through these efforts, the railroads delivered the service and efficiency benefits that they promised and passed along most of the savings to shippers, as this agency has repeatedly found.⁴

The Board cannot simply change its mind and now decide to re-Balkanize the rail network, abandoning a three-decade regulatory framework and disregarding the railroads' long-term restructuring efforts that are succeeding in delivering better service more efficiently. But that is what the agency has effectively proposed in the NPRM. By now promoting an increase in forced switching, the Board engages in baiting and switching: rejecting the agency policies that railroads relied on in good faith to produce today's revitalized rail network. Had the agency attempted to condition rail consolidations beginning in 1980 with today's forced switching proposal, railroads likely would not have undertaken the restructuring efforts they did, and the rail renaissance would have been stillborn. The Board should not do now the opposite of what it called for during those decades of pivotal railroad decisions by reinstating interchange-dependent service across the national rail system.

⁴ See, e.g., *Major Rail Consolidation Procedures*, 4 S.T.B. 570, 573 n.12 (2000) (“Agency decisions issued under our existing regulations have preserved and sometimes enhanced competition, while promoting efficiency-enhancing system rationalizations whose benefits were ultimately passed along to shippers in the form of lower rates and improved service.”); *Union Pacific/Southern Pacific Merger—General Oversight*, FD 32760 (Sub-No. 21), Decision No. 16, slip op. at 13 (STB served Dec. 15, 2000) (“Moreover, we have verified, through our staff study discussed above, that the western railroads have achieved significant efficiency gains over the past several years, and that they have indeed passed along many of those gains to their shippers in terms of reduced rates.”); Office of Economics, Environmental Analysis, and Administration, Surface Transportation Board, *Rail Rates Continue Multi-Year Decline 2* (Dec. 2000) (finding that since the Staggers Act, “nearly all of the productivity gains [experienced by railroads] have been passed along to rail customers (and ultimately consumers) in the form of lower rates”); see generally Transportation Research Board, *Modernizing Freight Rail Regulation* 160 (2015) (summarizing academic research on post-Staggers mergers as showing that “[e]fficiency gains were largely passed on to shippers through lower rates and enhanced services”).

A. ICC and Board Decisions Led to Restructuring of the U.S. Rail Network, Including Union Pacific’s Network, to Promote Single-Line Service.

The U.S. Government recognized the need to consolidate Class I railroads at least as early as 1920. At that time, the national rail system was overbuilt, with too many railroads and too much capacity. When Congress passed the Esch-Cummins Transportation Act that year, it included provisions directing the ICC to plan for a limited number of rail systems.⁵ The result was the never-implemented “Ripley Plan.”⁶ The Government subsequently created a separate commission to devise a plan to consolidate the rail network, spearheaded by John W. Barriger, but that plan, known as the “Prince Plan,” also was never implemented.⁷

In the late 1970s, and especially after multiple railroad bankruptcies and passage of the 4R Act in 1976⁸ and the Staggers Act in 1980,⁹ the process of railroad consolidation finally moved forward in an ambitious way and with strong agency support. Today’s larger Class I systems are products of ICC and Board decisions between 1980 and 1999 that advanced the congressional objective of healthier railroads delivering more reliable and safer service. Today’s Union Pacific resulted from five consolidations in the 1980-1999 timeframe:¹⁰ Union Pacific/Missouri Pacific; Union Pacific/Western Pacific; Union Pacific/Missouri-Kansas-Texas; Union Pacific/Chicago & North Western; and Union Pacific/Southern Pacific. The BNSF Railway (“BNSF”), Canadian National Railway (“CN”), Canadian Pacific Railway (“CP”), CSX

⁵ Pub. L. 66-152, 41 Stat. 456 (1920).

⁶ See Christian Wolmar, *The Great Railroad Revolution: The History of Trains in America* 296 (2012).

⁷ See Earl Latham, *The Politics of Railroad Consolidation 1933-1936*, 37-39 (1959).

⁸ Pub. L. No. 94-210, 90 Stat. 31 (1976).

⁹ Pub. L. No. 96-448, 94 Stat. 1895 (1980).

¹⁰ To avoid repetition, we use the terms “merger” and “consolidation” interchangeably.

Transportation (“CSXT”), The Kansas City Southern Railway (“KCS”), and Norfolk Southern Railway (“NS”) all are likewise products of rail consolidation during that period.

A basic premise of each of the ICC and Board consolidation decisions, including every decision that created today’s Union Pacific, was that single-line or single-system service¹¹ was superior to less efficient service provided by separate carriers using interchanges. Expanding single-line service was a primary public benefit, extolled by the agency, of every transaction. The ICC and the Board emphasized that single-line service eliminates delays at interchanges, expands commercial opportunities for shippers, makes it easier for shippers to interact with carriers, and ensures more reliable service that competes more effectively with other modes of transportation.

Although many may not personally recall the inefficiencies and frustrations of dealing with a Balkanized rail network with multiple interchanges, shippers in the 1980s and 1990s turned out in droves to support single-line service. The ICC cited their support repeatedly as evidence of the public benefits of eliminating interchanges. The ICC’s Rail Services Planning Office, in its *Rail Merger Study, Final Report*, found that “shippers chose single over multiple railroad service more than 90 percent of the time.”¹²

In two of the earlier consolidation decisions during the 1980-1999 period, the ICC explained in detail why single-line service is superior to interchange service. In *CSX Corp.*–

¹¹ Some transactions led to a consolidation of railroads into a single system but with the participants retaining their separate legal identities. Those systems later consolidated and today provide single-line service.

¹² Rail Services Planning Office, Interstate Commerce Comm’n, *Rail Merger Study, Final Report* 31 (1978).

Control–Chessie System, Inc., & Seaboard Coast Line Industries, Inc., 363 I.C.C. 521 (1980), the ICC expansively discussed why single-line service is better and why shippers preferred it:

It is generally thought that single-line service has many advantages over joint-line service for both shippers and carriers. Interchange operations can be eliminated, reducing both operating and overhead costs and transit time; transaction costs are reduced; and incentives to provide less than efficient service (arising from per diem charges for railcars, rate divisions, or production externalities) are reduced. Thus, speed, reliability, and handling are enhanced. For these reasons, shippers tend to prefer single-line service over joint-line service. (*Id.* at 553.)

The ICC explained that CSXT did not—at that time—plan to fully integrate the Chessie and Seaboard systems and that it would create only “single-system service,” not “single-line” service. The ICC, nevertheless, found that single-system service “will provide many of the benefits of single-line service” because centralization of priorities and management that would “enable the system to avoid many interchange costs . . . and delays.” *Id.* As the ICC concluded, “The consolidation of interchange partners should provide faster, more efficient service to a wider geographic area, to the public benefit.” *Id.* at 552.

The ICC’s decision in *Norfolk Southern Corp.–Control–Norfolk & Western Ry. & Southern Ry.*, 366 I.C.C. 173 (1982), also described “the inherent benefit of single-system service” as one of the principal public benefits of the consolidation. *Id.* at 195. The ICC explained:

Shippers, however, prefer single-system service. Single-system service offers the opportunity to improve speed and reliability of service and equipment utilization and distribution. It also focuses responsibility for an entire movement on a single carrier, improving shippers’ ability to control and trace individual shipments and to expedite shipments when necessary. Additionally, single-system responsibility facilitates prompt settlement of loss and damage claims. (*Id.* at 194-95, footnote omitted.)

Summarizing the public benefits of the transaction, the ICC stated that “[o]ne of the primary benefits of the proposed consolidation is the creation of a single railroad system,” in contrast to a rail system that “has not been adequately structured.” *Id.* at 194. The ICC flagged eliminating terminal interchanges as a specific example: “Operation of [Norfolk & Western] and Southern local and through trains to or from a consolidated terminal will reduce terminal delays involved in present interchange arrangements.” *Id.* at 204.

Every one of the ICC and Board decisions that approved consolidations involving Union Pacific highlighted single-line service as a public benefit.

- In *Union Pacific Corp.–Control–Missouri Pacific; Western Pacific*, 366 I.C.C. 462 (1982), the ICC offered a lengthy discussion of single-system service and its benefits. The ICC explained that “[s]hippers prefer single line or single system service because it improves reliability and transit times, and equipment availability.” *Id.* at 489. The ICC further observed that “[s]hippers also benefit from improved transit times and resultant reduced equipment costs made possible when single rail systems are able to minimize interchange delays by increasing the use of preblocking and run-through trains.” *Id.*
- In *Union Pacific Corp.–Control–Missouri-Kansas-Texas R.R.*, 4 I.C.C.2d 409 (1988), the ICC detailed the expected single-line service improvements from the consolidation. *See id.* at 430-31. Specifically, the ICC observed that “[c]ars currently interchanged between UP and MKT will spend less time in terminals due to the elimination of interchange delays and the establishment of new through blocks and better connections.” *Id.* at 431.
- In *Union Pacific Corp.–Control–Chicago & North Western Transportation Co.*, FD 32133, Decision No. 25 (ICC served Mar. 7, 1995), the ICC stated that “[t]here are substantial efficiencies in single-line service compared to joint-line service.” *Id.*, slip op. at 66-67.
- Finally, in *Union Pacific/Southern Pacific Merger*, 1 S.T.B. 233 (1996), the Board applauded “unprecedented opportunities for improved routings and new single-line routes here.” *Id.* at 381. The Board focused directly on shippers served by only one of the two merging carriers, explaining that “every shipper served by UP, but not by SP, will gain single-line service to all SP points, and vice versa. More than 350,000 cars, trailers, and containers, carrying 26 million tons of freight, will gain single-line service each year. The BNSF agreement will add single-line service for another 120,000 cars a year.” *Id.*

The benefits of single-line service, compared to interchange service, were so compelling that both the Board and shippers expressed concerns about the partial *loss* of single-line service

when CSXT and NS divided Conrail in 1998. As a result, the Board provided special protections for affected shippers. The Board concluded that the harm to those shippers was outweighed by the benefits of new single-line service to six times as many shippers, but not before it prescribed a rate preservation remedy that had been negotiated to protect the adversely affected shippers. *See CSX Corp. & Norfolk Southern Corp.—Control & Operating Leases/Agreements—Conrail Inc.*, 3 S.T.B. 196, 271 (1998).

B. Union Pacific Reconfigured Its Network at Great Cost and Effort to Deliver the Benefits of Single-Line Service for Shippers.

For the last three decades, U.S. Class I rail systems have been streamlining their networks, primarily to provide the public (and private) benefits of single-line service. They removed or spun off the excess capacity that had burdened the industry for the prior six decades and more. They invested billions of dollars to provide the single-line service that was a pivotal basis for ICC and Board merger approvals. They eliminated freight yards that had provided en route switching as they redesigned train service to carry cars farther with fewer work events. They eliminated or scaled back interchange facilities that became unnecessary or inefficient.

Union Pacific reconfigured six railroads to deliver on the commitments it made in obtaining ICC and Board authority for its consolidations. Since 1982, when Union Pacific started to implement the Union Pacific/Missouri Pacific/Western Pacific consolidations, we have been developing a rail network that maximizes single-line service and expedites customer shipments. We rebuilt the deteriorating Western Pacific and much of the Missouri-Kansas-Texas, which otherwise would have failed. We rebuilt Chicago & North Western's line to Chicago and substantially upgraded Southern Pacific's infrastructure.¹³

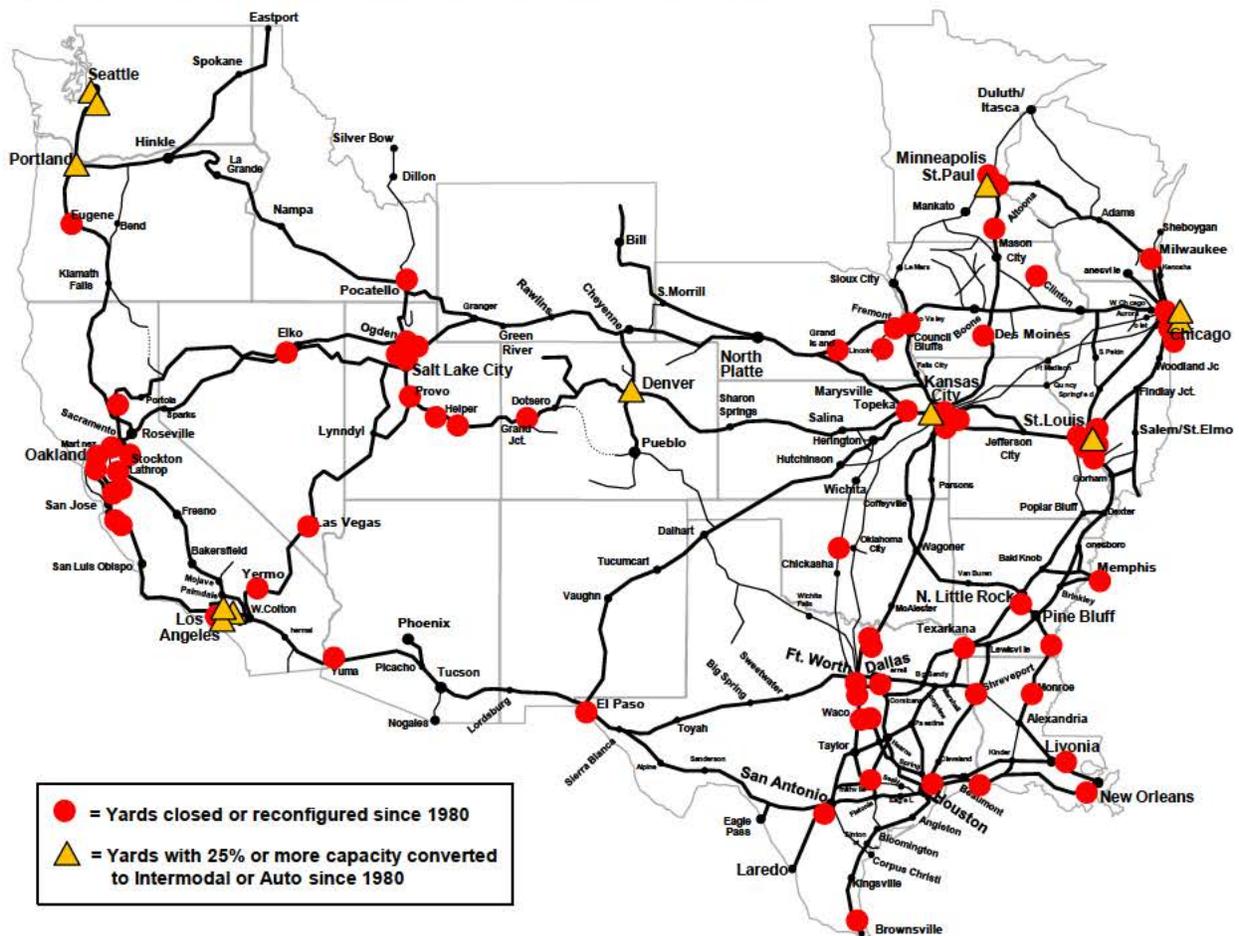
¹³ *See* Verified Statement of James R. Young in STB Docket No. EP 705, App. A at 7-8.

Union Pacific's merger integration efforts continued well into the last decade, requiring even greater investment than management had expected, particularly to provide reliable single-line service involving Chicago & North Western and Southern Pacific terminals and routes. For example, we expanded yards in Mankato and Altoona on the former Chicago & North Western, and we continue to double track the former Southern Pacific's Sunset Corridor.

Union Pacific would not have proceeded with the consolidations that created our current system had we been subject at the time to the proposed forced switching rules. The rules would have so severely undermined our ability to realize single-line efficiencies and provide single-line service that the economics of the consolidations would not have justified going forward.

To provide the benefits of single-line service that the ICC and Board identified, Union Pacific systematically eliminated interchanges between component carriers, developed train plans and car blocking plans so traffic could bypass yards, and removed or downsized yards that were no longer needed. As shown on the map in Figure 2 on the next page, many of these yards were in terminal areas, where land could be sold or used for other purposes. Union Pacific repurposed a number of these yards into intermodal, automotive, or transload facilities. The map shows how Union Pacific eliminated or scaled back en route yards that were no longer needed because shipments could move over longer distances without switching. At many more locations, Union Pacific, BNSF, and their predecessors have removed tracks at junctions where interchange with the other railroad was no longer required or no longer efficient. Since 1989, for example, BNSF and Union Pacific have eliminated approximately 53 interchange locations between the two railroads, and KCS and Union Pacific have eliminated at least seven.

Figure 2: Union Pacific Yards Closed or Reconfigured Since 1980

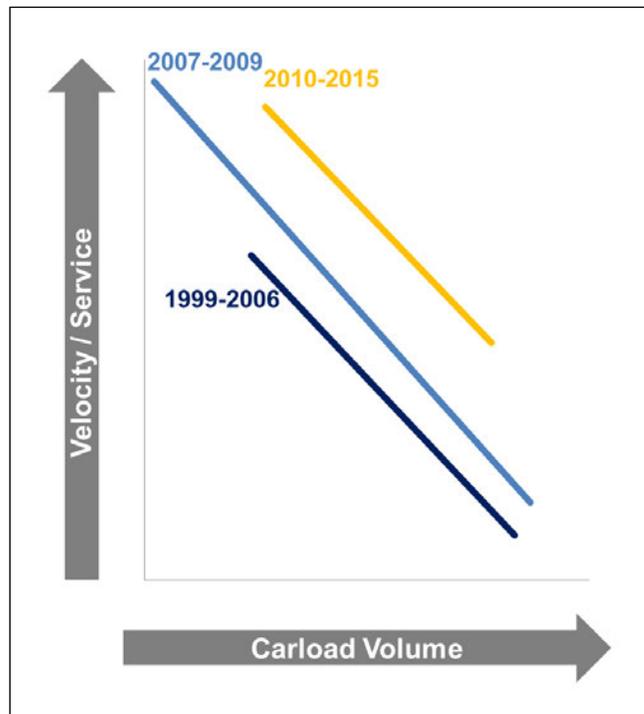


Since 1982, Union Pacific has invested tens of billions of dollars of private capital to replace, improve, reconfigure, and upgrade its network. Almost all of these investments (Positive Train Control investments are a notable exception) have advanced the goal of providing single-line service to our customers. As Mr. Haley explains:

We aligned our capital spending with our basic operating strategy of concentrating traffic where possible on higher-capacity, higher-density corridors. We developed train plans and car blocking plans so traffic can bypass yards, reducing time-consuming interchanges. We removed or downsized yards we no longer needed, while at the same time we invested in modernizing and increasing the productivity of yards and terminal facilities that now handle increased volumes of traffic. (Haley VS at 2.)

Union Pacific today delivers the efficient, reliable, single-line service that the ICC and the Board endorsed as public benefits in multiple merger decisions. The foundation for providing this service is the heavy investment and rigorous planning that lets us move each shipment with the fewest possible stops for switching or other work events, enabling us to move more freight at better service levels than ever before. Union Pacific’s continuing investments in our network and focus on managing for fluid operations allows us to improve service, even as we face new challenges, such as the current surge of growth in our Southern Region. As shown below in Figure 3, as we align our investments with our operating plans, average volume and average velocity move up and to the right, which means we are moving more freight, faster.

Figure 3: Union Pacific Service-Volume Relationship



Implementation of the Board’s proposal would undermine the foundation on which Union Pacific has built our improved service. For every interchange where forced switching was imposed, the car to be interchanged would be delayed, extra resources would be consumed, and

congestion in yards would increase. The car to be interchanged (assuming it originates at a shipping location on Union Pacific) must be withdrawn from our normal operating plan and switched into a group of cars for interchange. Similar issues would arise for cars terminating at locations on Union Pacific. Replicating these interruptions, and the associated delays, thousands of times per day throughout the Union Pacific system would severely undermine the efficient single-line service we have developed over the last several decades. We discuss the operating consequences in detail below in Part IV and in Mr. Haley's accompanying verified statement.

The ICC and the Board approved and endorsed the consolidation of the U.S. rail system to increase single-line service and eliminate interchanges. Having embraced and applied a strong public policy favoring single-line service—which Union Pacific delivered to the public's benefit at enormous cost—the Board cannot and should not return to the unsuccessful and inefficient pre-1980s rail structure by displacing single-line service with interchange service.

III. THE BOARD'S PROPOSAL IS AN UNJUSTIFIED AND UNLAWFUL DEPARTURE FROM PRECEDENT.

The Board's proposal to promote the use of forced switching is unlawful because the agency has not provided a reasoned explanation for its departures from precedent. The Board's proposal departs from agency precedent in two respects. First, it is fundamentally inconsistent with the agency's longstanding policies favoring single-line service on which Union Pacific and other railroads have relied. Second, it replaces the agency's current forced switching rules, which apply that highly intrusive remedy only when necessary to remedy a specific competitive abuse, with an approach designed to produce a wholesale change in the railroad industry's competitive landscape. However, even if the Board had valid reasons to depart from its precedent, it could not adopt the proposed rules. The Board says that its proposed rules "adhere more closely to the statutory language," NPRM at 16, but its proposal reflects impermissible interpretations of that

language. Finally, the Board failed to weigh and balance the impacts of its proposal on the rail transportation policy factors enumerated in 49 U.S.C. § 10101. If the Board had undertaken the required weighing and balancing, it would have been evident that its proposal is inconsistent with U.S. rail transportation policy.

A. The Board Does Not Provide a Reasoned Explanation for Its Departure From Precedent.

An agency may not depart from a prior policy without acknowledging “that it *is* changing position” and showing “that there are good reasons for the new policy.” *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). “[A] more detailed justification” is required when the “prior policy has engendered serious reliance interests that must be taken into account.” *Id.* As the Supreme Court explained, “[i]t would be arbitrary or capricious to ignore such matters.” *Id.*

In the NPRM, the Board fails to acknowledge the fundamental inconsistency between the agency’s prior policies favoring consolidation and single-line service and its proposal now to promote the use of forced switching. Nor does it acknowledge the reliance interests at stake. As discussed in Part II, Union Pacific and other railroads relied on the prior policies in spending billions of dollars to restructure their systems and operating plans. The Board’s proposed rules would significantly change the structure and operations that Union Pacific developed under express agency authority and at great cost by requiring new interchanges at numerous locations across its system. The Board’s failure to address the railroads’ serious reliance interests in connection with this policy change and the likely consequences of the change is particularly notable because Union Pacific discussed these issues extensively in its comments filed in Docket

No. EP 711,¹⁴ and because the Board specifically references industry consolidation and network optimization as factors that led it to revisit its forced switching policy, *see* NPRM at 9.

The Board does acknowledge that it is revising its forced switching policy, but it never provides any serious justification for that change. It cites several factors that led it to *revisit* the existing policy, but it never explains how any of these factors actually justifies its new proposal. The Board thus fails to comply with the basic requirement of administrative law to articulate a “rational connection between the facts found and the choice made.” *Motor Vehicle Mfrs. Ass’n of the U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962)). The Board’s failure to “show that there are good reasons for the new policy” is especially problematic in this instance because, as discussed above, its longstanding forced switching policy “engendered serious reliance interests that must be taken into account.” *Encino Motorcars, LLC v. Navarro*, 136 S. Ct. 2117, 2126 (2016) (quoting *Fox Television Stations*, 556 U.S. at 515).

For example, the Board says that “shippers have not filed petitions for reciprocal switching in many years” to obtain a remedy for anticompetitive conduct, and that the remedy has “become dormant.” NPRM at 8, 9. However, the Board’s observation appears to confirm that railroads are complying with the law—they are not engaging in anticompetitive conduct. The Board certainly never demonstrates that the existing regulations have discouraged shippers from seeking remedies for anticompetitive conduct. It never finds that any railroad has engaged in anticompetitive conduct, let alone that forced switching was the only or the most appropriate remedy for such conduct. Moreover, the proposed rules are not even designed to remedy

¹⁴ *See* Opening Comments and Evidence of Union Pacific Railroad Company at 8-22, *Petition for Rulemaking to Adopt Revised Competitive Switching Rules*, EP 711 (Mar. 1, 2013).

anticompetitive conduct—rather, they would promote forced switching without regard to the existence of anticompetitive conduct. *See* NPRM at 19 (“Unlike the agency’s current regulations, neither prong of these proposed regulations requires a showing of anticompetitive conduct.”).

The Board’s desire “to promote further use” of forced switching appears to arise from the agency’s curious view that the mere infrequency of requests for reciprocal switching orders somehow itself constitutes regulatory failure—as if intervention in railroad markets, rather than reliance on market forces, is the Board’s mandate and the test of a successful public policy. Nothing in the Board’s congressionally determined mission, jurisdiction, and authority supports such a view. Indeed, Congress expressed a preference for market forces over regulatory intervention. *See* 49 U.S.C. § 10101(1), (2).

The Board also notes a concern that “the consolidation of Class I carriers and the creation of short lines that may have strong ties to a particular Class I likely reduces the chance of naturally occurring reciprocal switching as carriers seek to optimize their own large networks.” NPRM at 9. It speculates that consolidation and the creation of short lines with “strong ties to a particular Class I,” which appears to be a reference to short line spin-offs that include the use of interchange commitments, “could lead to reduced competitive options for some shippers.” *Id.* But the Board never claims, let alone determines, that consolidations or spin-offs with interchange commitments, both of which occurred with the agency’s express and repeated blessings, actually *reduced* “the chance of naturally occurring reciprocal switching” or any “competitive options.” Indeed, the Board has previously explained that the agency had carefully reviewed each merger proposal, and where necessary, imposed conditions to ensure that no shipper lost the benefits of competition. *See Central Power & Light Co. v. Southern Pacific et al.*, 1 S.T.B. 1059, 1071 n.18 (1996). Moreover, we are not aware of a case in which the agency

considered the creation of a short line to be anticompetitive. To the contrary, it has consistently recognized that such transactions, including those involving interchange commitments, generally “will maintain the *status quo* and will not change the competitive situation.” *Class Exemption for the Acquisition & Operation of Rail Lines Under 49 U.S.C. § 10901*, 1 I.C.C.2d 810, 817 (1985); *see also Review of Rail Access and Competition Issues—Renewed Petition of Western Coal Traffic League*, EP 575, slip op. at 9 (Oct. 30, 2007) (“Thus, what WCTL seeks here is not to restore a competitive option lost due to a sale or lease with an interchange commitment, but rather to create a new competitive option that did not exist prior to the sale or lease.”).

The Board also points to “better overall economic health of the rail industry as well as increased productivity and technological advances” as reasons for revisiting its forced switching policy. NPRM at 9. However, it never explains how “better overall economic health,” “increased productivity,” and “technological advances” have any connection to forced switching, much less that they provide a rationale for such a profound policy change. To the extent these factors have any relationship to forced switching, they affirm the wisdom of the agency’s past promotion of single-line service, and provide a reminder of the Board’s failure to analyze the potential impacts of its proposal on the future operations and financial health of the rail industry. Indeed, the Board’s citation of these factors suggest that it is playing a game of regulatory Robin Hood—picking winners and losers—instead of allowing markets to allocate efficiently among railroads and shippers the aggregate gains from the railroads’ productivity and technology improvements.

B. The Board’s Proposed Rules Constitute an Unlawful Implementation of the Forced Switching Provisions of Section 11102(c).

Even if the Board could justify a departure from precedent, it could not lawfully adopt the particular rules it has proposed here. The Board’s proposal would transform forced switching

from its intended use as a remedy for anticompetitive conduct that leads to inadequate service into a tool for restructuring the rail industry and regulating rates.

1. The Board’s Current Rules Properly Establish a Forced Switching Remedy for Anticompetitive Conduct That Affects the Adequacy of Rail Service.

The Board’s current forced switching rules reasonably provide for a reciprocal switching remedy in the case of anticompetitive conduct that degrades service for shippers. Congress first authorized the ICC to require rail carriers to enter into reciprocal switching arrangements in the Staggers Act. In adopting rules to implement this provision, the ICC understood that Congress first required a showing of anticompetitive conduct that affects the adequacy of rail service before the agency could find that forced switching is “in the public interest” or “necessary to provide competitive rail service.” The ICC explained this understanding in *Midtec*: “[W]e think it correct to view the Staggers changes as directed to situations where some competitive failure occurs.” *Midtec Paper Corp. v. Chicago & North Western Transp. Co.*, 3 I.C.C.2d 171, 174 (1986). That is, Congress intended the agency to use a reciprocal switching order as a remedy “to correct abuses,” and “to assure that shippers receive adequate service.” *Id.* at 174, 181 (citing H.R. Rep. No. 96-1430, at 116 (1980)).

In *Midtec*, the ICC appropriately rejected the use of forced switching “solely to introduce additional carrier service.” *Id.* at 174. In upholding the agency’s decision, the D.C. Circuit agreed that the use of forced switching solely to “enhance competition between rail carriers” would be contrary to Congress’s intent because such use “could radically restructure the railroad industry”:

If the Commission were authorized, as *Midtec*’s argument entails, to prescribe reciprocal switching or terminal trackage whenever such an order could enhance competition between rail carriers, it could radically restructure the railroad industry. We have not found even the slightest indication that Congress intended the Commission in this way to conform the industry more closely to a model of perfect competition.

Midtec Paper Corp. v. United States, 857 F.2d 1487, 1507 (D.C. Cir. 1988); *see also Baltimore Gas & Elec. Co. v. United States*, 817 F.2d 108, 115 (D.C. Cir. 1987) (finding “not the slightest indication that Congress intended to mandate a radical restructuring of the railroad regulatory scheme”).

The ICC also correctly rejected the use of forced switching as an alternative means of regulating rates. In upholding the ICC’s *Midtec* decision, the D.C. Circuit rejected the shipper’s contention that “section [11102] was intended to be an alternative means of obtaining rate relief, requiring the Commission affirmatively to move the national rail system toward a regime more like perfect competition, with the attendant benefits of marginal cost ratemaking.” *Midtec*, 857 F.2d at 1505. Of course, use of forced switching to regulate rates would be flatly inconsistent with Congress’s establishment of separate rules for rate cases that accommodate the need for differential pricing in the rail industry. *See* 49 U.S.C. §§ 10701, 10704, 10707; *see also* H.R. Rep. No. 96-1035, at 122 (1980) (“Differential pricing tends to optimize the advantage for all users of the service or purchasers of the goods.”).

2. The Board’s Proposed Rules Would Unlawfully Use Forced Switching to Regulate the Rail Industry’s Structure and Rates.

In the NPRM, the Board acknowledges that Congress intended forced switching to be a remedy. The Board says it is proposing “a reciprocal switching standard that makes the remedy more equally available to all shippers.” NPRM at 15. But its proposal would not expand the availability of forced switching as a remedy. Instead, the Board proposes to order reciprocal switching under circumstances in which there is no wrong to remedy.

In advancing its proposal, the Board relies on some Staggers Act legislative history to claim that § 11102 “was clearly intended to empower the agency to encourage the availability of reciprocal switching when appropriate.” NPRM at 15. However, the Board confuses two issues:

(i) the existence of a predicate for ordering reciprocal switching; and (ii) whether reciprocal switching should be ordered once a predicate for relief has been found. The Staggers Act’s legislative history shows that Congress encouraged the ICC to use forced switching as “an avenue of relief”—that is, as a remedy for some identified wrong. H.R. Rep. 96-1430, at 116 (1980). Encouraging the agency to exercise its remedial discretion in favor of ordering reciprocal switching “when appropriate”¹⁵ is not the same as promoting the use of such switching to enhance competition when there is no wrong to remedy.¹⁶

a) The proposed “practicable and in the public interest” prong is contrary to Section 11102.

Under the first prong of the Board’s proposal, a party could obtain a reciprocal switching order by showing that forced switching would be “practicable and in the public interest.” NPRM at 17. However, in proposing to determine whether forced switching is “in the public interest” through an open-ended balancing of “potential benefits” and “potential detriments” of such switching, *id.* at 18, the Board is not proposing to use forced switching as a remedy. Rather, it would permit issuance of a reciprocal switching order solely because it perceives a net benefit from mandating additional carrier service. Such use of forced switching would amount to restructuring of rail networks and operations based on regulatory fiat—an action not authorized by the statute.

¹⁵ Section 11102(c)(1) gives the Board discretion to deny relief even if the statutory standards were met. *See* 49 U.S.C. § 11102(c)(1) (“The Board *may* require rail carriers to enter into reciprocal switching agreements”) (emphasis added).

¹⁶ That a shipper has access to only one railroad cannot be regarded as a wrong, or even as a harm, to be remedied. To the contrary, “[w]ell-established transportation law recognizes that some shippers are served by a single railroad. It also recognizes that such ‘captive shippers’ may pay higher rates under ‘demand-based differential pricing’ legal principles that govern the railroad industry, to reflect the economies of the railroad industry and the fact that some rail traffic is more captive and some more competitive.” *Union Pacific/Southern Pacific Merger (Houston/Gulf Coast Oversight)*, 3 S.T.B. 1030, 1032 (1998).

The Board claims that, under its proposal, “shippers would be required (as is the case today) to . . . bear the burden of showing that reciprocal switching is needed,” and that “[t]here would be no presumption of need.” NPRM at 19. That claim is plainly incorrect. A showing that the alleged potential benefits of switching outweigh the alleged potential detriments in no way demonstrates “that reciprocal switching is needed.”

Moreover, the Board is mistaken when it asserts that precedent supports its proposed balancing test for determining when forced switching is “in the public interest.” *See* NPRM at 17-18. Agency precedent confirms that § 11102’s “in the public interest” test requires more than balancing potential benefits and potential detriments from a reciprocal switching order—it requires proof that some proven wrong requires a remedy, specifically, some proven wrong that is manifested through inadequate service. Remedying such a wrong is “in the public interest.”

In *Jamestown, N.Y., Chamber of Commerce v. Jamestown, Westfield & Northwestern R.R.*, 195 I.C.C. 289 (1933), a case involving joint use of terminal facilities under a statutory predecessor to current § 11102, the ICC explained that it could not find forced access to be “in the public interest” absent a showing of “some actual necessity or some compelling reason”:

The expression ‘in the public interest’ means more than a mere desire on the part of shippers or other interested parties for something that would be convenient or desirable to them. Where something substantial is to be taken away from a carrier for the sole benefit of such parties, and with no corresponding benefit to the carrier, as in this case, we are inclined to the view that some actual necessity or some compelling reason must first be shown before we can find such action to be in the public interest. (*Id.* at 292.)

The ICC also made clear that the “actual necessity” or “compelling reason” sufficient to satisfy the “in the public interest” test must involve “inadequate service”:

The desirability, but not the necessity, of the additional operation of a joint terminal freight station is shown, but the record does not show that Jamestown shippers are so inadequately serviced at the

present time as to warrant us, from the standpoint of the public interest, to require [joint use of terminal facilities]. (*Id.*)

See also York Mfrs. Ass'n v. Pennsylvania R.R., 73 I.C.C. 40, 50 (1922) (“There is no showing that the shippers are so inadequately served at present that we are warranted, from the standpoint of the public interest . . . to require the Pennsylvania to share its terminal facilities . . .”).

The Staggers Act’s legislative history makes clear that the “in the public interest” test in § 11102(c) means that a reciprocal switching order, like an order requiring the joint use of terminal facilities, is to be used as a remedy where harm resulting from a wrong is manifested through inadequate service. The Conference Report says that the “in the public interest” test for reciprocal switching is “the *same standard* the Commission has applied in considering whether to order the joint use of terminal facilities.” H.R. Rep. 96-1430, at 116 (1980) (emphasis added). The report further explains that “where reciprocal switching is feasible, it provides *an avenue of relief* for shippers where only one railroad provides service *and it is inadequate.*” *Id.* (emphasis added).¹⁷ The Board’s current rules correctly recognize that the Staggers Act incorporated a forced switching remedy to provide an additional form of relief for inadequate service in “situations where some competitive failure occurs.” *Midtec*, 3 I.C.C.2d at 174.

Finally, even if the Board could disregard the remedial and service-related elements of the statutory test for determining whether a reciprocal switching order is “in the public interest,” it could not simply balance all of the “potential benefits” and “potential detriments.” The Board could weigh only *public* benefits. Benefits to a single shipper that is not suffering from anticompetitive or service-related harms are not public benefits, even if they outweigh the harms

¹⁷ The Board’s proposed first prong also departs from the congressionally ratified “in the public interest” test in that it is not limited to situations “where only *one railroad* provides service” *id.* (emphasis added), because it would permit reciprocal switching orders where more than one Class I railroad serves a shipper facility, *see* NPRM at 18.

from forced switching to a railroad and other potentially affected parties. Instead, they are private benefits.¹⁸ They are transfers of wealth from railroads (and potentially other parties) to the shipper seeking forced switching. A shipper might desire such private benefits, but regulatory intervention in markets to fulfill that desire is not “in the public interest.” *Cf.* 49 U.S.C. § 10101(1), (2). As the ICC explained in *Jamestown*, “[t]he expression ‘in the public interest’ means more than a mere desire on the part of shippers or other interested parties for something that would be convenient or desirable to them.” *Jamestown*, 195 I.C.C. at 292.

In sum, even if the Board had justified its departure from precedent, it could not lawfully order reciprocal switching under § 11102(c)’s “in the public interest” test based merely on a balancing of the potential benefits and potential detriments as proposed in the NPRM. As the D.C. Circuit stated, there is “not . . . even the slightest indication that Congress intended” to authorize the agency to use forced switching to “restructure the railroad industry.” *Midtec*, 857 F.2d at 1507.

b) The proposed “necessary to provide competitive rail service” prong is contrary to Section 11102.

The second prong of the Board’s proposal is also unlawful. Under the second prong, a party could obtain a reciprocal switching order by showing that forced switching is “necessary to provide competitive rail service.” NPRM at 19. The Board proposes: (i) to find that standard is satisfied if a shipper shows that “intermodal and intramodal competition is not effective with respect to the movements of the shipper(s) and/or receivers(s) from whom switching is sought”

¹⁸ *Cf. Union Pacific/Southern Pacific Merger*, 1 S.T.B. 233, 380 (1996) (“Traffic diversions, as such, are not public benefits; only the service improvements and costs savings associated with traffic diversions can be counted as public benefits.” (quoting *UP/CNW*, slip op. at 67)); *see also* Wright VS at 4 (“Forced access is appropriate only where it serves the public interest, rather than bestowing special benefits upon particular private parties.”).

id., and (ii) to use its existing market dominance test (designed for rail rate proceedings) to determine when a movement is without effective intermodal and intramodal competition, *see id.* at 22. In using these criteria, the Board improperly presumes that a railroad is not providing “competitive rail service” whenever that railroad would be found market dominant under the Board’s existing market dominance test.

Treating market dominance as a wrong that justifies a forced switching remedy flouts the rail regulatory framework Congress established. *First*, a showing of market dominance provides no basis for concluding that a railroad is engaged in abusive conduct or is providing inadequate service—the Board’s market dominance test does not touch on issues of a railroad’s conduct or adequacy of service. *Second*, even if forced switching could be used as an alternative means of regulating abusive rates charged by a railroad with market dominance, Congress has established *by statute* that “a finding of market dominance does not establish a presumption that [a challenged] rate exceeds a reasonable maximum.” 49 U.S.C. § 10707(c). In the absence of any proof that a shipper is subject to inadequate service or unreasonable rates, the Board cannot conclude that forced switching is “necessary to provide competitive rail service” under § 11102(c).¹⁹

In addition, application of the second prong would restructure the railroad industry in a fundamental way—in large part because the Board’s market dominance test does a poor job of

¹⁹ Once again, the NPRM is plainly incorrect when it asserts that, under the proposal, “shippers would be required (as is the case today) to . . . bear the burden of showing that reciprocal switching is needed,” and that “[t]here would be no presumption of need.” NPRM at 19. To be clear, by using the criteria it articulates in the NPRM, the Board would be *presuming* a need for forced switching without any proof that forced switching is actually “necessary to provide competitive service.”

identifying when railroads actually face effective competition.²⁰ Under the second prong, the Board could insert a second railroad at *every* shipper facility served by a single Class I railroad near an interchange with another Class I where the shipper lacks a non-rail alternative between the traffic’s origin and the destination—unless the serving carrier sets rates below the 180% R/VC level.²¹ Indeed, under the Board’s “limit price” test—a critical part of the agency’s market dominance analysis that goes unmentioned in the NPRM—even when a shipper has a feasible, non-rail or intermodal option from origin to destination, the Board presumes that the shipper lacks effective competition if the serving carrier’s R/VC ratio from charging the same rate as the alternative would exceed the serving carrier’s RSAM. *See, e.g., E.I. DuPont de Nemours & Co. v. Norfolk S. Ry.*, NOR 42125, slip op. at 20 (STB served Mar. 24, 2014). Union Pacific’s RSAM is 186%, which means that the Board could insert a second railroad even where a shipper has a feasible non-rail alternative—unless Union Pacific sets rates below the 186% R/VC level. Also, under the Board’s market dominance analysis, even a shipper that could move the same product by truck from a nearby origin is deemed *not* to have effective competition. The Board will not consider geographic (or product) competition, despite “acknowledg[ing] that product and geographic competition can provide effective alternatives that may be sufficient to constrain a

²⁰ In the rate case context, the Board has acknowledged some of the shortcomings of its market dominance test, pointing out that market dominance is only a threshold issue, and thus even if the test erroneously fails to detect the presence of effective competition, shippers still must prove the challenged rates are unreasonable before they may obtain relief. *See Market Dominance Determinations*, 3 S.T.B. 937, 948-49 (1998). Here, however, there would be no similar backstop for the flawed test.

²¹ The Board would not order switching if either carrier shows “that the proposed switching is not feasible or is unsafe, or that the presence of such switching will unduly hamper the ability of that carrier to serve its shippers,” but the Board plainly believes these circumstances will be the exception, not the rule, since it treats their existence as an affirmative defense. NPRM at 19.

rail rate to a reasonable level.” *Market Dominance Determinations*, 5 S.T.B. 492, 493 (2001).²²

The Board’s proposal to use forced switching to insert a second railroad at so many shipper facilities would substantially restructure the rail industry, contrary to Congress’s intent. *See Midtec*, 857 F.2d at 1507; *Baltimore Gas & Elec.*, 817 F.2d at 115.

C. The Board Failed to Evaluate the Impacts of Its Proposal as They Relate to the Rail Transportation Policy Factors Enumerated in 49 U.S.C. § 10101.

The Board acknowledges that in determining whether to adopt the proposed rules, it must weigh and balance the rail transportation policy factors enumerated in 49 U.S.C. § 10101. *See* NPRM at 16. Yet the Board merely lists the several factors that it considers “relevant to [its] analysis.” NPRM at 16. It never considers how its proposal to promote forced switching would impact those factors, much less weighs or balances the factors. Adopting new forced switching rules without considering the relevant policy factors in § 10101 would be arbitrary and capricious. *See Ass’n of Am. R.Rs. v. STB*, 237 F.3d 676, 680 (D.C. Cir. 2001).

For many reasons, the Board’s proposal to review forced switching requests on a case-by-case basis is no substitute for evaluating whether its broad proposal to promote the use of forced switching is consistent with the relevant policy factors enumerated in § 10101.

First, the Board states that it would not use individual forced switching proceedings as a forum for litigation over “broad regulatory policies,” including “revenue adequacy.” NPRM at 18. Thus, the Board would never evaluate the implications of its forced switching proposal on the policies “to allow, to the maximum extent possible, competition and the demand for services

²² The Board’s current regulations allow railroads to rely on evidence of geographic competition to demonstrate that forced switching is not necessary to remedy an anticompetitive act. *See* 49 C.F.R. § 1144.2(b)(2). The Board’s proposal would remove the railroads’ ability to rely on evidence of geographic competition, *see* NPRM at 27, without providing any backstop for inaccurate market dominance decisions comparable to the SAC test, *see* note 20, *supra*.

to establish reasonable rates,” 49 U.S.C. § 10101(1), “to minimize the need for Federal regulatory control over the rail transportation system,” *id.* § 10101(2), or “to promote a safe and efficient rail transportation system by allowing rail carriers to earn adequate revenues,” *id.* § 10101(3).

The Board’s adoption of the proposed rules would necessarily reduce the extent to which “competition and the demand for services” are used “to establish reasonable rates for transportation by rail,” contrary to the policy in § 10101(1). As the Board has previously recognized, there is a critical distinction between the market-based “competition” favored in § 10101(1) and “artificially forc[ed] competition.” *Central Power & Light Co. v. Southern Pacific et al.*, 2 S.T.B. 235, 239 (1997), *aff’d sub nom. MidAmerican Energy Co. v. STB*, 169 F.3d 1099 (8th Cir. 1999). Under the Board’s proposal, the rates railroads establish when they or other railroads obtain access to a shipper facility through forced switching, or the rates they establish to avoid a forced switching challenge, would be *inconsistent* with the statutory policy favoring competition because those rates would reflect the artificial and coerced presence of a second railroad pursuant to a Board mandate.

The rates railroads establish under forced switching also would not reflect the “demand for services.” The Board would be inserting a second railroad where demand has not supported voluntary entry by a second railroad. And to the extent the entry (or threatened entry) of a second railroad drives rates below levels that would be found reasonable in a rate case, the new forced switching rules would disrupt differential pricing—that is, pricing in accordance with demand.²³

²³ In fact, under the first prong of the proposal, the Board could apparently order a railroad to provide forced switching even where it is charging rates below the statutory 180% R/VC jurisdictional threshold for rate cases.

The Board and the courts have consistently recognized that differential pricing is crucial to the rail industry's viability, implicating § 10101(3)'s concern for the achievement of "revenue adequacy, which is necessary for long-term capital investment, and ultimately, for a safe and efficient rail system." *MidAmerican*, 169 F.3d at 1109. In *Midtec*, the ICC and the D.C. Circuit both expressly noted that one disadvantage of forced switching is that the serving carrier "would lose the ability to price its portion of the through service in response to the varying demands for different commodities or movements." *Midtec*, 3 I.C.C.2d at 177; *see also Midtec*, 857 F.2d at 1501 (quoting the ICC and noting the "tension, if not outright conflict" with current § 10101(1)). Yet the Board does not mention differential pricing, demand-based pricing, or the effects of its proposal on revenue adequacy and its role in promoting safe and efficient rail transportation anywhere in the NPRM. The Board goes even further to bury the issue: as noted above, the proposed rules expressly prohibit railroads from raising considerations of overall revenue adequacy in individual cases. *See NPRM* at 18, 42.

With regard to § 10101(2), adoption of the Board's proposal would dramatically increase the agency's control over the rail transportation system, directly contrary to the statutory policy "to minimize the need for Federal regulatory control over the rail transportation system." 49 U.S.C. § 10101(2). Under the Board's current policy, the agency intervenes only to remedy anticompetitive conduct. Under the Board's proposed policy, the agency could exert regulatory control by making a "practicable and in the public interest" determination everywhere a shipper has facilities served by a Class I railroad and near an interchange with another Class I. *See NPRM* at 18. The Board could also find itself establishing forced switching fees governing

millions of movements. The Board never addresses the massive increase in regulatory intervention that would result from adopting its proposed policy.²⁴

Second, the Board’s adoption of the proposed rules would have significant impacts on railroad behavior unrelated to any specific case. For example, adoption of the proposed rules by itself would reduce railroad investment in infrastructure, undermining the policy “to ensure the development and continuation of a sound rail transportation system.” 49 U.S.C. § 10101(4). In fact, the Board’s proposal is already having an impact on the capital budgeting process—at least at Union Pacific. As Mr. Panzer explains, almost every capital investment decision that Union Pacific makes must now consider the potential risk of forced switching. This affects not only our potential investments in terminal facilities, which the Board might order us to use to switch traffic for a competitor, but also our potential investments in main line tracks, sidings, and other infrastructure, which would generate lower-than-expected returns if the traffic using those assets could be diverted to a competitor. The uncertainty generated by the proposed rules itself raises the bar for our capital investments. We discuss the substantial, harmful impacts of the Board’s proposal on our infrastructure investments in detail in Part V.

Third, in forced switching cases brought under the second prong of the Board’s proposal, the case-by-case approach would not allow the agency to evaluate the adverse consequences that it acknowledges in the NPRM. In discussing the first prong of the Board’s proposal, the agency recognizes that forced switching can have negative impacts on railroad investment (§ 10101(4)), efficiency and service (§ 10101(3), (9), (14)), safety (§ 10101(8)) and employees (§ 10101(11)).

²⁴ The Board also never considers the inconsistency between its forced switching policy and the statutory protections against requiring an originating railroad to “short-haul” itself, *see* 49 U.S.C. § 10705(a), or to quote “bottleneck” rates, *see id.* § 10701(c).

See NPRM at 18.²⁵ The Board apparently plans to weigh and balance the impacts on a case-by-case basis under the public interest test. However, the Board would not have an opportunity to weigh and balance these impacts under its second prong. The second prong does not include consideration of forced switching’s impacts on investment, efficiency, or employees. The Board also would not consider service or safety unless the consequences were so severe that switching was “not feasible,” “unsafe,” or would “unduly hamper” service. NPRM at 19.

Finally, the Board’s case-by-case approach would not allow the agency to evaluate the cumulative and unpredictable adverse network effects of forced switching on safety, service, and efficiency. As Mr. Haley explains, the additional car handling required for forced switching will inevitably reduce efficiency and increase costs. The impacts might be small in any one case, but they will add up, especially if shippers use forced switching for a significant volume of traffic, and the adverse consequences will not be confined to those shippers that benefit from forced switching. Employing a case-by-case approach means the Board would never evaluate the broader impact of its proposal on the rail industry—it would miss the forest for the trees.

Most alarmingly, the Board implies that it need not consider the implications of adopting a proposal that it knows could produce service meltdowns because its case-by-case approach will mitigate the risk. *See* NPRM at 17. But the case-by-case approach would not address one of the most significant risks associated with forced switching: unpredictable changes in traffic volumes. The Board may order forced switching only when terminals appear uncongested, but the case-by-case approach provides no help when congestion increases over time and a shipper continues to

²⁵ Indeed, the only potentially positive impact the Board identifies, “access to new markets” *id.*, would more appropriately be addressed under the railroads’ statutory obligation to interchange traffic when they cannot provide origin-to-destination service, *see* 49 U.S.C. § 10703.

demand inefficient switching. Absent a means of immediately turning off the forced switching operations, reliance on a case-by-case approach is no substitute for weighing and balancing the potential cumulative impacts of forced switching on rail service and efficiency and the unpredictability of these impacts over time. We discuss those substantial and harmful impacts in detail in Part IV.

Had the Board considered these impacts, it would have been obliged to acknowledge their overwhelming inconsistency with the policy factors enumerated in § 10101.

- The Board would be relying on forced competition and limiting the use of differential pricing, contrary to the policy “to allow, to the maximum extent possible, competition and the demand for services to establish reasonable rates for transportation by rail.” 49 U.S.C. § 10101(1).
- The Board would be promoting forced switching, contrary to the policy to “minimize the need for Federal regulatory control over the rail transportation system.” *Id.* § 10101(2).
- The Board would be abetting rate compression, contrary to the policy “to promote a safe and efficient rail transportation system by allowing rail carriers to earn adequate revenues.” *Id.* § 10101(3).²⁶
- The Board would be discouraging rail investment, contrary to the policy “to ensure the development and continuation of a sound rail transportation system,” *id.* § 10101(4), and “to foster sound economic conditions in transportation,” *id.* § 10101(5).
- The Board would be promoting operations that require extra car handlings and disrupt existing single-line service, contrary to the policy “to operate transportation facilities and equipment without detriment to the public health and safety,” *id.* § 10101(8); “to encourage honest and efficient management of railroads,” *id.* § 10101(9); “to encourage . . . safe and suitable working conditions in the railroad industry,” *id.* § 10101(11); and “to encourage and promote energy conservation,” *id.* § 10101(14).

The Board has not justified its departure from precedent and cannot reconcile its NPRM with either Section 11102 or the national rail transportation policy.

²⁶ This would also be contrary to the Board’s continuing duty to assist the railroads in attaining revenue adequacy so they can invest in “infrastructure . . . needed to meet the present and future demand for rail services.” *Id.* § 10704(a)(2).

IV. THE BOARD’S CURRENT RULES PROPERLY TREAT FORCED ACCESS AS AN EXTREME REMEDY LIMITED TO INSTANCES OF ANTICOMPETITIVE CONDUCT.

The Board’s current access rules advance the public interest by allowing market forces to determine the railroad industry’s structure and by using forced switching only as an extreme remedy for anticompetitive conduct. Competition policy disfavors the use of forced access. The Board fails to explain why it believes that reversing course and promoting the use of forced access is appropriate for the rail industry.

The Board’s current rules for addressing rate and access disputes advance the public interest by allowing market forces to determine the rail industry’s structure, while providing remedies to address specific instances of anticompetitive conduct and unreasonably high rates. As Professor Murphy explains: “When outcomes are market determined, forces of supply and demand work to allocate scarce capacity and resources efficiently.” Murphy VS at 3. In contrast, “[r]egulatory interference with market outcomes, even if well-intentioned, can cause substantial economic harm by overriding and distorting incentives.” *Id.* at 4. The risks from regulatory interference “are especially strong in network industries,” like the railroad industry, because of the large amount of interaction among customers served using shared assets:

The large amount of interaction among customers served using shared assets and costs means that investment in or operational adjustments to one part of the rail network will affect many rail customers, including many distant customers. In the railroad industry, a misplaced effort to reduce one shipper’s rates not only reduces investment that would benefit that shipper, but can deter efficient investments and result in general deterioration of railroad service for all shippers that also would benefit from those investments. This is an important, but less obvious cost of regulation. (*Id.*)

Because the risks from interference are so high, regulators should intervene only where markets have demonstrably failed to produce competitive outcomes. As Professor Murphy

emphasizes, “where only a single railroad serves a shipper’s facility, this generally is an efficient outcome of a competitive market” in which entry by a second railroad is not efficient or economically viable, “not evidence of market failure.” *Id.* at 5. Moreover, a railroad with exclusive access to a shipper facility may face effective intermodal, product, or geographic competition. *See id.* But even a lack of effective competition is not evidence of market failure: “Even where there is a lack of effective competition, regulation is unwarranted unless a railroad charges rates above a competitive level or engages in anticompetitive conduct.” *Id.*

As Professor Murphy explains, where a market failure occurs and justifies regulatory intervention, “regulators should attempt to replicate competitive outcomes.” *Id.* at 6. The Board’s current rules are consistent with this principle. If the Board finds that a challenged rate exceeds a competitive level, it establishes the competitive level as a “rate ceiling” and allows the railroad to price at or below that ceiling and otherwise respond to market forces. *Id.* If the Board finds that a railroad has engaged in anticompetitive conduct, it can address that conduct through an access remedy. *See id.* at 6-7.

The Board’s proposal departs dramatically from the market-based principles that govern its current rules for rate and access disputes. As Professor Murphy explains, the Board’s proposal “allow[s] regulators to override market outcomes where there has been no market failure.” *Id.* at 8. The proposal could “require railroads to open their networks to competitors even where railroads have not engaged in anticompetitive conduct.” *Id.* This will harm shippers and the broader public interest by reducing railroads’ incentives to invest, creating inefficiencies in rail operations, and disrupting competitive pricing. *See id.* at 8-14. Moreover, to the extent the Board is attempting to use forced switching as an alternative to rate regulation, it would violate the principle that regulators should attempt to replicate competitive outcomes. Under forced

switching, rates could be driven below competitive levels through the creation of cross-subsidies. *See id.* at 14. Also, inserting a second carrier into markets where it is more efficient for only one railroad to provide the service “creates inefficiency that would not exist” if a railroad charging rates above competitive levels simply “were required to reduce its rates.” *Id.* at 15.

Broader economic principles and lessons from other sectors of the national economy reinforce concerns about the harmful impacts of forced switching on the rail industry. As Professor Wright explains, “[f]orced access is widely disfavored as a matter of policy and the economics of regulation because it poses inherent risks to the public interest.” Wright VS at 3. “Forced access unequivocally reduces incentives to invest, with the predictable consequence of diminishing quality of service and dampening innovation.” *Id.* Thus, U.S. “[c]ompetition policy has long rejected imposing upon a firm any duty to share or assist a rival.” *Id.* at 4.

As Professor Wright observes, concerns for the negative impacts of forced sharing have been forcefully articulated in antitrust law, where courts have made clear that “forced access should be considered an extreme remedy, rarely imposed, and generally disfavored.” *Id.* at 7. Intellectual property law similarly disfavors forced sharing out “because it deters the very incentives that spark creation in the first place.” *Id.*

Where U.S. regulators have imposed forced access, they have done so in industries that operate under very different conditions than the rail industry. Forced sharing is an element of the regulatory regimes for electricity, natural gas, and telecommunications. *See id.* at 19. However, as Professor Wright observes, there is no comparison between the challenges that arise in managing movements of electrons or molecules of gas and those that arise in managing movements of rail cars. *See id.* at 19-21. Switching rail cars “is a capital- and labor-intensive operation, requiring not only substantial upfront investment, but also significant ongoing

resources to operate efficiently on a daily basis.” *Id.* at 20. Moreover, when regulators in other industries have resorted to forced access, “the result has been as economics predicts: reduced efficiency, diminished incentives to invest, and reduced innovation.” *Id.* at 18. Professor Wright describes the Federal Communication Commission’s experience with “line sharing” relating to Digital Subscriber Line service as a stark example of how an ill-advised sharing requirement can suppress investment. *See id.* at 22-23. As Professor Wright explains, concerns about the impacts of forced sharing on investment are exacerbated in the context of the railroad industry. *See id.* at 24. The NPRM provides no justification for imposing such a regime here.

V. IMPLEMENTATION OF THE BOARD’S PROPOSAL WOULD CAUSE SUBSTANTIAL HARM TO UNION PACIFIC’S SERVICE TO SHIPPERS.

The Board observes that rail carriers have previously raised concerns about forced switching’s “serious, adverse effects on rail service . . . [and] network efficiency.” NPRM at 7. It asserts, however, that the adverse impacts, including the prospect that congestion resulting from forced switching “can turn quickly into regional and national backlogs, affecting shippers of all commodities,” would be mitigated by its proposed case-by-case review of forced switching requests. NPRM at 17. The Board’s confidence in a case-by-case approach reveals a fundamental misunderstanding of the mechanisms by which forced switching would adversely impact rail service. Implementation of the proposal would lead to significant degradation of Union Pacific’s service levels.

A. Forced Switching Would Create Inefficiency and Degrade Service, Increasing the Likelihood of Service Meltdowns.

The most immediate adverse impacts of forced switching on rail service and efficiency are clear. As Mr. Haley explains, forced switching would inevitably create inefficiency because more time and more resources would be required to provide the same level of service.

Locomotive and crew time would be consumed by the extra switching movements. Service

quality would fall, as cars spend an extra 48 to 96 hours in yards, passing back and forth between railroads. *See* Haley VS at 4-5. If timeliness and reliability of service were the issue, no shipper would ever choose reciprocal switching over single-line service.²⁷

Of particular concern, the adverse impacts of forced switching would not be confined to the shippers that use forced switching. Cars that would otherwise depart on through trains would sit in yards, or they would be hauled from one railroad's yard to another railroad's yard, consuming yard capacity, increasing congestion, and interfering with service to other customers. Car cycle times for all customers would increase, and customers would respond by adding more cars to the network, placing more burdens on yards. As Mr. Haley explains, these externalities can become vicious circles that gridlock a terminal and spread to other parts of our network. *See* Haley VS at 5-6.

Forced switching also deprives us of tools we use to prevent congestion in terminals. Union Pacific has car management technologies that allow us to match the flow of inbound cars with the track capacity at customer facilities. However, when cars come to us through reciprocal switching, we lose control over the inbound flow. As Mr. Haley explains, this means we can be left holding cars in our yards when customer tracks are full, adding to congestion and potentially creating a downward spiral toward gridlock. *See id.* at 6.

The prospect that forced switching would create congestion leading to gridlock is a major concern. An equally grave concern is the significant harm that forced switching would do to the efficient and reliable service we have created through our basic operating strategy. As Mr. Haley

²⁷ Union Pacific discussed the negative impacts of forced switching on yard operations and transportation planning, and provided detailed illustrations of the impacts of forced switching on yard operations in Houston, Kansas City, and Sioux City in comments filed in Ex Parte No. 705. That material is being submitted with these comments as Appendix C.

explains, Union Pacific has been pursuing a long-term strategy of aligning our capital spending and our operating strategy to concentrate traffic on higher-capacity, higher-density corridors. This allows us to operate using fewer, larger trains, with the fewest possible stops for switching or other work events. By maximizing traffic density and uninterrupted movement, we can keep our locomotives in service more of the time, schedule our train crews more effectively and efficiently, improve utilization of our track assets, and spread the fixed costs of our network over more shipments. We can move cars farther without the need for switching that causes delay, increases costs, increases the risk of damage to freight and injury to employees, and reduces consistency and reliability. *See id.* at 6-7.

Forced switching would undermine our basic strategy by fragmenting traffic into smaller volumes. We would have to run more trains with fewer cars and stop the trains more often for intermediate switching. In many cases, we have eliminated or repurposed the yards that were once used for this type of switching, and we could not reproduce the lost yard capacity. Forced switching would unravel our efficiencies, increase our operating costs, and degrade service to our customers. We would be left with stranded investments where we have modernized and increased the productivity of our yards and terminals to handle large volumes of traffic. We would be saddled with congestion in yards that were never designed to perform the additional work that would be required. *See id.* at 7-8.

Of course, Union Pacific often must adjust our operations in response to changing traffic patterns and congestion in order to maintain or restore fluidity. However, as Mr. Haley explains, forced switching would substantially increase the challenges we face. *See id.* at 8-9. *First*, we would never achieve complete recovery. Forced switching would always leave us operating less efficiently than before, using more resources than necessary to handle the same volume of traffic.

Second, forced switching would create a new source of unpredictability with limited opportunity for exercising operational control. Our network would be continually vulnerable to this new source of disruption, as shippers unilaterally elect whether and when to shift their traffic. The NPRM stresses “the shipper’s flexibility,” NPRM at 27, and proposes to remove a provision in the current rules that requires a shipper seeking reciprocal switching to show that it would use this switching “to meet a significant portion of its current or future railroad transportation needs between the origin and destination,” *id.* at 26 (quoting 49 C.F.R. § 1144.2(a)(2)). Forced switching would also consume resources that we would otherwise have available to respond to market-based or weather-based service challenges. *Third*, we could not attempt to mitigate the impacts from disruptions by working with customers to anticipate and adjust for changing traffic patterns. A customer’s use of forced switching will likely come with less warning than a change in market conditions. Again, the NPRM emphasizes “the shipper’s flexibility.” *Fourth*, one important way that we respond to changes in traffic patterns and congestion is by investing capital in our network. However, under forced switching, our overall level of capital investment would be reduced, the duration of traffic shifts would be uncertain, and we would have no incentive to undertake projects that would facilitate forced switching, as discussed in Part VI.

B. A Case-by-Case Approach Would Not Mitigate Forced Switching’s Most Serious Harms to Service.

The Board’s reliance on a case-by-case approach to mitigate harms to rail service from forced switching would leave many of the most serious harms unaddressed. Of course, the Board need not engage in a case-by-case analysis to conclude that forced switching would create inefficiency and degrade service. As Mr. Haley explains, forced switching would add time and costs to each and every shipment. *See* Haley VS at 14.

Reliance on a case-by-case approach allows the Board to discount these costs in any one case, while never confronting their cumulative impact on service, or the impacts that become clear only as traffic volumes change over time. As Mr. Haley explains, in some situations, the loss of one shipper's traffic might be sufficient to disrupt our service plan—for example, we would no longer have enough volume to build a train that runs through an intermediate terminal without switching. In other situations, however, we would not change our service plan until after suffering a cumulative loss of traffic from several shippers that use forced switching. In still other situations, the full extent of the loss might not become apparent until economic conditions change and overall traffic levels drop. At that point, even if we could prove that we could have maintained our efficient service in the absence of forced switching, the case-by-case approach would provide no remedy. Mr. Haley also points out another harm the case-by-case approach would never detect: where forced switching would deprive us of traffic that in the future would have helped justify the introduction of a more efficient service plan. *See id.* at 14-15.

Finally, the case-by-case approach would not address the most significant concern—the risk of a major terminal meltdown. Presumably, the Board will not grant forced access when a terminal is severely capacity constrained. However, problems will arise where shippers obtain forced access and conditions later change—traffic levels grow due to localized demand shifts or broader economic growth, major weather disruptions occur at some parts of the system, or other challenges develop. This is precisely when the cumulative impacts of forced switching would be most felt—when capacity would have been sufficient to handle the traffic surge or the harsh winter weather, if resources were not being unnecessarily consumed and diverted because of the additional car dwell time and handlings required by forced switching. This is one of the ways in which forced switching is likely to cause meltdowns. *See id.* at 15-16.

The Board would never see these situations coming under its case-by-case approach. As Mr. Haley explains, when a shipper seeks forced switching, it will often be impossible to know how much traffic would be involved, how much the traffic might grow, how much other traffic might grow, or how traffic flows might change. The Board’s proposal to maximize each “shipper’s flexibility” (NPRM at 27) exacerbates the uncertainty. As a result, we could not predict precisely when or where meltdowns would occur—but they are a foreseeable consequence of promoting the use of forced switching, and once such disruptions occur, they can spread quickly, and they take a long time to bring back under control. *See Haley VS at 16.*

VI. IMPLEMENTATION OF THE BOARD’S PROPOSAL WOULD RESULT IN A SUBSTANTIAL REDUCTION OF UNION PACIFIC’S INVESTMENT IN INFRASTRUCTURE.

The Board’s failure to address the impacts of its proposal on railroads’ capital investment is just as disturbing as its dismissive treatment of operational impacts. The Board is wrong if it believes that the railroads’ generally improved financial condition means forced switching would not have a significant impact on capital investment decisions. Demands for capital investment in Union Pacific’s network are increasing, and the nature of demand has changed over time in ways that make investment more risky. We are investing more heavily in projects where the expected returns that drive our investment decision depend on traffic and revenue growth, rather than productivity and cost savings, and the amount we must invest to generate any given level of benefit is increasing. The Board’s proposal greatly increases the risk that projects will not generate expected traffic and revenue growth, thus undermining the business justifications for undertaking investments that would benefit our customers.

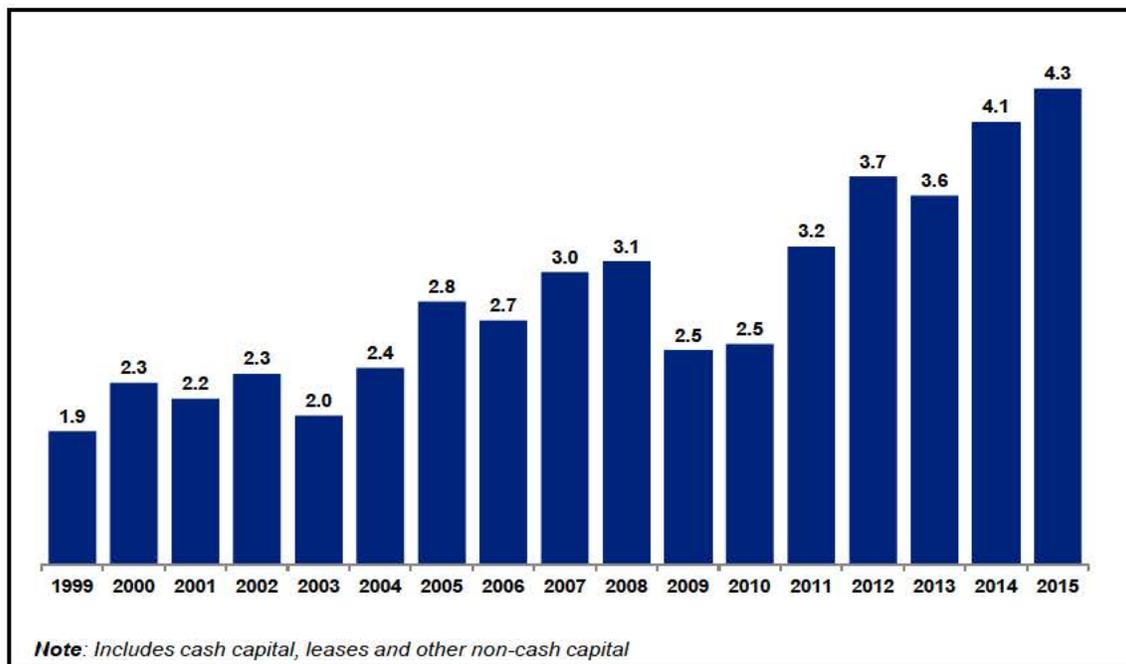
A. Union Pacific Faces Strong Demand for Capital Investment.

Union Pacific must continue to invest to compete for business and to provide the amount and quality of service our customers are demanding. As shown below in Figure 4, from 1999 to

2008, our annual capital expenditures grew from \$1.9 billion to \$3.1 billion. When the recession decreased carloadings and railroad earnings fell, we pulled back on capacity investment both as a prudent measure to preserve liquidity and because we had significant excess capacity due to the dramatic decrease in traffic. However, our capital spending remained robust, exceeding levels in any year before 2005. In fact, we used the opportunity to make aggressive investments to reduce slow orders on our lines, so we could provide stronger service as traffic returned.²⁸

As the economy began to recover, we increased our capital spending. From 2011 through 2015, we invested at levels above the record-setting, pre-recession levels. Union Pacific has used this high level of capital spending to expand service offerings, enhance productivity, and increase service quality for our customers, anticipating that future returns would justify the investment.

Figure 4: Union Pacific Capital Investment (billions of dollars)



²⁸ See Verified Statement of Lance M. Fritz in STB Docket No. EP 705, App. B at 11-12.

Union Pacific continues to identify new capital projects that will allow us to expand and improve service for our customers. As Mr. Panzer explains, we are facing growing needs for capital investment because of the shifting nature of the demands for our service. Lower coal volumes have reduced demand on some portions of our network, but in other locations we are focused more than ever before on supporting new business growth. For example, we have been investing to expand capacity in our Southern Region to support growth in our customers' chemicals and plastics business. We have also been investing to expand yards and terminals across our network to handle growing volumes of industrial products business, such as frac sand. We cannot simply use the capacity made available as a result of lower coal volumes to handle this traffic, because much of the new demand is concentrated in the eastern third of our network, and many of the growth products require handling in yards or terminals that are increasingly capacity constrained. *See Panzer VS at 5-6.*

Moreover, the costs of adding capacity are rising. As Mr. Panzer explains, we have already added sidings, cross-overs, and connections where they would have the biggest impact per dollar on throughput. Now, we must spend more capital to achieve an equivalent impact on capacity. In addition, much of the demand for new capacity is occurring where acquisition of land needed to construct new rail facilities is difficult and expensive. And, once we acquire the property, construction can be costly and difficult because of environmental and permitting challenges. This is particularly true in our Southern Region. *See id. at 6-7.*

We want to be able to invest to expand our network and improve our service to meet customer demands and compete for new business. The Board should not ignore the strong demands for capital investment as it considers changes to its forced switching rules.

B. Implementation of the Board’s Proposal Will Lead to Reduced Capital Investment.

If implemented, the Board’s proposal would have a pernicious impact on the investments customers are demanding from Union Pacific. As Mr. Panzer explains, we make capital investment decisions on a project-by-project basis, analyzing each project to determine whether the expected return on investment (“ROI”) exceeds our cost of capital by enough to justify the investment. A project’s expected ROI reflects our expectations about its potential to generate revenue growth (*e.g.*, by attracting new traffic) and cost savings (*e.g.*, by enabling more efficient handling of existing traffic). If a project’s expected ROI does not exceed our hurdle rate, we will not make the investment. Our shareholders would not allow us to spend good money on unpromising projects. *See Panzer VS at 3-4.*²⁹

The proposed rules would decrease the number of potential projects for which the expected ROI justifies investment, because it would reduce the expected ROI from those projects. As a result, fewer projects would be funded, and investment in our network would decline. Moreover, in most cases, the proposed rules would discourage investment before shippers even considered seeking forced switching, so the Board’s case-by-case approach to addressing the impact of the proposed rules on investment would be irrelevant.

Mr. Panzer illustrates the problem in the context of a decision whether to expand a yard to handle anticipated traffic growth from a shipper that might qualify for forced switching. With

²⁹ Union Pacific’s former CEO, Jim Young, has explained that Union Pacific competes with other firms for capital. Our investors have the choice of investing in any public firm or industry and compare returns across those alternatives. If regulation will reduce our projected returns, we will have no choice but to curtail investment, as investors will withdraw investment. *See Verified Statement of James R. Young in STB Docket No. EP 705, App. A at 13-14.* Union Pacific’s current CEO, Lance Fritz, concurs that we cannot invest without assurance of a reasonable return. *See Verified Statement of Lance M. Fritz in STB Docket No. EP 705, App. B at 6.*

forced switching potentially in play, we must discount the expected revenue gains to account for the risk of losing the incremental traffic to a competitor. We also must factor in the risk that we could lose not only the incremental business, but also the traffic we currently handle through the yard—all while subsidizing our competitor’s use of our new investment. In this situation, there would be no case-by-case consideration of the impact of forced switching: the potential for forced switching would kill the investment at the proposal stage, before the Board could even consider such a request. *See Panzer VS at 8.*³⁰

Use of the Board’s proposed second prong would exacerbate the problem through application of the agency’s limit price test to determine whether shippers qualify for forced switching. In addition to the problems discussed in Part III.B.2, the test relies on variable cost calculations (for the limit price R/VC ratio) and a benchmark (RSAM) based on system-average costs; thus, it fails to recognize that railroads incur above-average costs when they invest,³¹ and that they will not invest unless they expect to be able to establish rates sufficient to cover those above-average costs.³²

Moreover, as Mr. Panzer explains, and as Mr. Haley also observes, the investment-killing impacts of the Board’s proposal would not be confined to those shippers that might qualify for

³⁰ As noted above, there is not even the prospect of a case-by-case review of the impact on capital investment if the shipper seeks forced switching under the “necessary to provide competitive rail service” prong of the proposed rules. *See NPRM at 19.*

³¹ The revenue shortfall and revenue-to-variable-cost ratio calculations underlying the RSAM benchmark are based on historic investment costs. In contrast, analyses of proposed capital projects rely on current costs of material and labor and a hurdle rate that is greater than the historic cost of capital to reflect the associated risks. *See Panzer VS at 3-4.*

³² From a slightly different perspective, even if the existence of a limit price R/VC above RSAM provided some information about market dominance with respect to traffic that moves at system-average costs (which it does not), it would provide no information where a railroad’s costs to serve a shipper include the costs of a new investment.

forced switching. The proposal also would discourage investment in expanding a yard to benefit shippers that could not qualify for forced switching, if that yard also is used, or could be used, by shippers that might qualify for forced switching. *See* Panzer VS at 8-10; *see also* Haley VS at 11. As Mr. Panzer notes, we face situations today where investments in capacity might ultimately make forced switching feasible. *See* Panzer VS at 10. We would be much less likely to expand capacity if we could be forced to use some of the new capacity to subsidize a competitor's handling of our customers' traffic. Again, a case-by-case approach is no solution—forced switching would kill the investment before a shipper could even request forced switching.

These investment-killing impacts of forced switching would affect nearly every potential project designed to accommodate anticipated or even actual traffic growth, not just projects that are closely connected with particular shippers. Whenever we considered investing in new line capacity or en route yards or any facility that would be used by a substantial volume of traffic that would qualify for forced switching, we would have to factor into our analysis the risk that traffic will be diverted through forced switching and that we will be left with an unnecessary or underutilized investment. *See* Panzer VS at 8; *see also* Haley VS at 11-12.

Union Pacific's concerns are not hypothetical. The Board's proposal is already having an impact on our capital budgeting process. As Mr. Panzer explains, many of the capital investments we consider are so costly that they are not projected to generate positive returns for many years. Moreover, once those investments are made, they are sunk—we cannot redeploy the assets and recoup our investment if expected demand does not materialize. *See* Panzer VS at 2-3; *see also* Haley VS at 12-13. Even if we factor in the prospect that we may gain some traffic through forced switching of traffic now handled by other railroads, we still face great uncertainty about how much traffic we would gain, how much we would lose, and where on our system the

gains and losses would occur. Given the uncertainty created by the NPRM, we have little choice but to assume the worst. As Professor Wright explains, this is not a matter of excessive caution—economic research shows that it is a predictable, rational, optimal investment strategy for a firm considering large, sunk-cost investments in times of regulatory uncertainty. *See* Wright VS at 25-26.

VII. SPECIFIC ISSUES ON WHICH THE BOARD REQUESTED COMMENTS

The Board specifically seeks comments on the issue of access pricing and on the issue of what constitutes a “reasonable distance” from a “working interchange.” *See* NPRM at 21, 24-26. Although we strongly disagree with the Board’s proposed rules, we address these two issues below in response to the Board’s request for comments.

A. Access Pricing Should Replicate Market Outcomes to the Extent Possible by Fully Compensating the Serving Railroad for Lost Contribution.

The Board acknowledges that it may not simply impose an access price or a pricing formula when it orders reciprocal switching. *See* NPRM at 24. Rather, it must afford the affected railroads the opportunity to agree on “the conditions and compensation applicable” to any forced switching arrangement. 49 U.S.C. § 11102(c)(1). This is a critical feature of the statutory framework because it potentially allows the railroads to avoid what would likely be a complex regulatory proceeding.

If the Board offers guidance regarding the compensation terms it would set if affected railroads cannot agree, the guidance should incorporate the principle that access pricing must replicate market outcomes. A market outcome in the context of reciprocal switching would compensate the railroad serving the shipper for (i) the serving railroad’s actual costs of providing the switching service, including the costs of any new investment needed to provide the service or to offset impacts on the railroad’s other customers, and (ii) the serving railroad’s opportunity

cost of providing the switching—that is, the railroad’s lost contribution to fixed costs from the switched traffic. The lost contribution to fixed costs would cover not only contribution to the fixed costs of assets used for switching, but also contribution to the fixed costs of the other assets that the incumbent would have used to provide the origin-to-destination line-haul service for the traffic. *See Wright VS* at 28-29. As Professor Wright explains, if an alternate line-haul railroad could attract business from a shipper while leaving the serving railroad and its customers no worse off, then the alternate service must be more efficient, and a competitive market should produce a voluntary switching arrangement. *See id.* at 31-32.

If access pricing does not fully compensate the serving railroad for its actual costs to provide switching and its lost contribution, then an alternate railroad could capture a shipper’s business even though the switching arrangement is less efficient than existing single-line service. For example, a shipper may be willing to accept slower, less reliable service via forced switching that imposes higher costs on the serving railroad and its other customers, in order to obtain low rates from an alternate carrier. But if the serving railroad is not compensated for its actual costs to provide switching *and* its lost contribution, it would be cross-subsidizing a competitor—a result that a competitive market would not produce. Professor Wright provides a numerical illustration of how the failure to require compensation of the serving railroad for its lost contribution would facilitate inefficient switching and cross-subsidization. *See id.* at 30-32.

Moreover, if access pricing does not fully compensate the serving railroad for its actual costs to provide switching and its lost contribution, shippers could use forced switching to obtain reduced rates without ever proving that their rates were unreasonable. In fact, under the Board’s proposed first prong, shippers could seek forced switching even when their rates are below the jurisdictional threshold. However, the ICC and the Board have long recognized that, in order to

recover the very substantial joint and common costs of their networks, railroads must be able to charge customers different prices based on their different levels of demand for transportation services. In other words, railroads must be able to engage in demand-based differential pricing in order to have at least the opportunity to earn adequate revenues. *See, e.g., Coal Rate Guidelines, Nationwide*, 1 I.C.C.2d 520, 526 (1985); *Major Issues in Rail Rate Cases*, EP 657 (Sub-No. 1), slip op. at 20 (STB served Oct. 30, 2006) (“[T]he core regulatory principle in the rail industry is that a railroad must be able to engage in some form of demand-based differential pricing to have the opportunity to earn adequate revenues.”).

The Board’s proposal to create artificial competition for service to certain shippers would alter these shippers’ demand for service, thereby undermining the serving railroad’s ability to recover the joint and common costs of its network—unless the access price is established at a level that neutralizes the impact of the change in demand by preserving the serving railroad’s contribution. Under this approach to access pricing, a shipper may still see rates fall as a result of forced switching, but only when the alternate service is more efficient than the transportation provided by the serving railroad.³³

The Board proposes “two alternative approaches to access pricing.” NPRM at 25. Neither alternative would be appropriate because neither would compensate the serving carrier for its lost contribution.

The Board describes proposed “Alternative 1” as a method of determining access pricing “based on a specified set of factors.” *Id.* at 25. Most of the factors the Board lists appear to

³³ Of course, the new line-haul railroad would have to set rates for the new service that reflect the incremental costs the new traffic creates for its own network, as well as its own business conditions. Thus, we cannot predict the ultimate outcome from the shipper’s perspective.

involve actual costs of providing switching service, although it is not clear whether the factors would include the costs of new investment needed to provide the switching or to offset impacts on the serving railroad's other customers. As discussed above, the serving railroad's actual costs to provide switching are an important part of the costs that must be covered by the access price, but if the access price does not cover the serving railroad's lost contribution as well, that would open the door to cross-subsidies and would be inconsistent with differential pricing principles.

The Board describes proposed "Alternative 2" as a variant on the agency's methodology used in trackage rights cases, referred to as "SSW Compensation." *See id.* Again, the Board's proposal appears to address certain costs that should be covered by the access price, but it would not allow the serving railroad to recover its lost contribution—that is not part of the SSW Compensation scheme. Although the Board suggests that the access price should provide "a fair and reasonable return on the capital employed," *id.* at 25-26, in SSW Compensation cases, that phrase is used to refer to the capital employed on only those lines over which the trackage rights are provided. What is missing from the Board's Alternative 2 is a provision addressing the lost contribution to the joint and common costs of the line-haul portion of the move. In other words, Alternative 2 also opens the door to cross-subsidies and is inconsistent with differential pricing principles. If the alternate railroad can provide more efficient service using forced switching, it can and should pay an access price that covers both the serving railroad's actual costs to provide switching and its lost contribution.

B. Reciprocal Switching Should Be Available Only in Terminal Areas.

Under both prongs of the Board's proposed rules, a party seeking forced switching would have to show that "there is or can be a working interchange between the Class I carrier servicing the party seeking switching and another Class I rail carrier within a reasonable distance of the

facilities of the party seeking switching.” NPRM a 21. The Board specifically invites parties to comment on an appropriate definition of the term “reasonable distance.” *Id.*

The Board should not adopt a standard based on the concept of “reasonable distance.” If it proceeds with its proposed rule change, then rather than develop a new body of precedent to define the term “reasonable distance,” the Board should provide that reciprocal switching is available “when a shipper is located within a terminal area served by two Class I railroads and there is or can be a working interchange between the two Class I railroads in the terminal area.”

This terminal-area approach is required by statute. When Congress adopted what is now § 11102(c), “reciprocal switching” was understood to involve switching in commonly served terminal areas. For example, the ICC explained in *Railroad and Warehouse Commission of Minnesota v. Chicago Great Western Railway*, 262 I.C.C. 437 (1945): “It is a common custom for carriers to publish switching charges for intraterminal movements between industries located upon private side-tracks on their lines and the point of interchange with other carriers The switching of cars in such service is called reciprocal switching.” *Id.* at 437-38; *see also, e.g., Switching Charges & Absorption Thereof at Shreveport, LA*, 339 I.C.C. 65, 70 (1971) (“It has long been a common practice among the railroads to participate at commonly served terminal areas in what is called reciprocal switching.”). A Board order requiring a carrier to interchange traffic with a railroad outside a terminal area could be accomplished only under § 10705(a)(2)(B) and (C) of the statute. Section 10705 limits the circumstances under which the Board can prescribe through routes in situations not involving reciprocal switching to protect the originating carrier’s right to the long haul. *See* 49 U.S.C. § 10705(a)(2)(B), (C).

Apart from the statutory requirement, adoption of the terminal-area approach should simplify the application of any new rules. The Board already has precedent that addresses the

concept of a “terminal area,” so there would be no need to develop a potentially different set of rules to address what should be essentially the same issue. *See, e.g., Golden Cat Div. of Ralston Purina Co. v. St. Louis S.W. Ry.*, NOR 41550, slip op. at 7 (STB served Apr. 25, 1996); *Rio Grande Indus., Inc.–Purchase & Related Trackage Rights–Soo Line R.R. Line Between Kansas City, MO & Chicago, IL*, FD 31505, slip op. at 10-11 (ICC served Nov. 15, 1989).

VIII. CONCLUSION

The Board’s proposed rules are contrary to the agency’s statutory mandate. Moreover, the proposed rules are a significant departure from existing regulations. Nowhere in the NPRM does the Board provide an adequate justification for changing its regulatory approach so drastically. The Board never explains why it considers it appropriate to embrace a scheme of regulatory intervention that would essentially restructure the rail industry, as opposed to today’s use of narrowly tailored remedies to address demonstrated wrongs.

The Board’s proposal would upend existing rail operations, injecting new inefficiencies into operations and significant uncertainty into rail planning. The disruption and congestion that will follow when the Board orders reciprocal switching at various locations has the potential to cause service meltdowns. In addition, the uncertainty that railroads will face regarding potential loss of traffic and shifts in traffic patterns as a result of forced switching will inevitably depress investment in the nation’s rail system.

The Board should withdraw the proposed rules and terminate this proceeding.

Respectfully submitted,

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October 26, 2016

BEFORE THE
SURFACE TRANSPORTATION BOARD

Docket No. EP 711 (Sub-No. 1)

RECIPROCAL SWITCHING

VERIFIED STATEMENT

OF

THOMAS C. HALEY

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VERIFIED STATEMENT

OF

THOMAS C. HALEY

My name is Thomas C. Haley. I am Vice President – Network Planning and Operations for Union Pacific Railroad Company, a position I have held since 2014. I began my railroad career in 1983 and joined Union Pacific in 1989. At Union Pacific, I have worked in the Operating, Network Design, and Finance departments. I hold an MBA in finance and transportation from Indiana University.

I have previously testified before the Surface Transportation Board about rail operations and service, most recently at the Board's March 26, 2014, hearing in *Petition for Rulemaking to Adopt Revised Competitive Switching Rules*, Ex Parte No. 711, and the Board's April 10, 2014, hearing in *United States Rail Service Issues*, Ex Parte No. 724.

In my current job, I am responsible for ensuring that Union Pacific operates as efficiently as possible today and has the appropriate resources to continue doing so in the future. I oversee our service design function, which is charged with taking a holistic view of our network and creating transportation plans to move traffic across the network as efficiently as possible for the benefit of our customers. I also oversee our resources planning function, which is charged with assuring that we have the resources in place—the tracks and yards, equipment, and workforce—to execute our service plan. My resource planning role includes responsibility for the Operating Department's input into the railroad's capital planning process, which involves allocating capital investment between maintenance projects, to keep our network functioning at a sufficient level, and capacity projects, to handle growing and shifting traffic. Service design, resource planning, and capital planning must be closely coordinated to identify areas on our network that require

investment based on current operations and traffic projections to ultimately deliver a high-quality product for our customers.

In this statement, I describe how the Board's proposal to promote the use of forced reciprocal switching would undermine everything we work so hard to achieve through service design and capital planning. Increased use of forced switching would degrade service, destroy efficiency, reduce our ability to plan and manage operations, and increase demands for capital investment, while reducing our ability and incentive to make those investments.

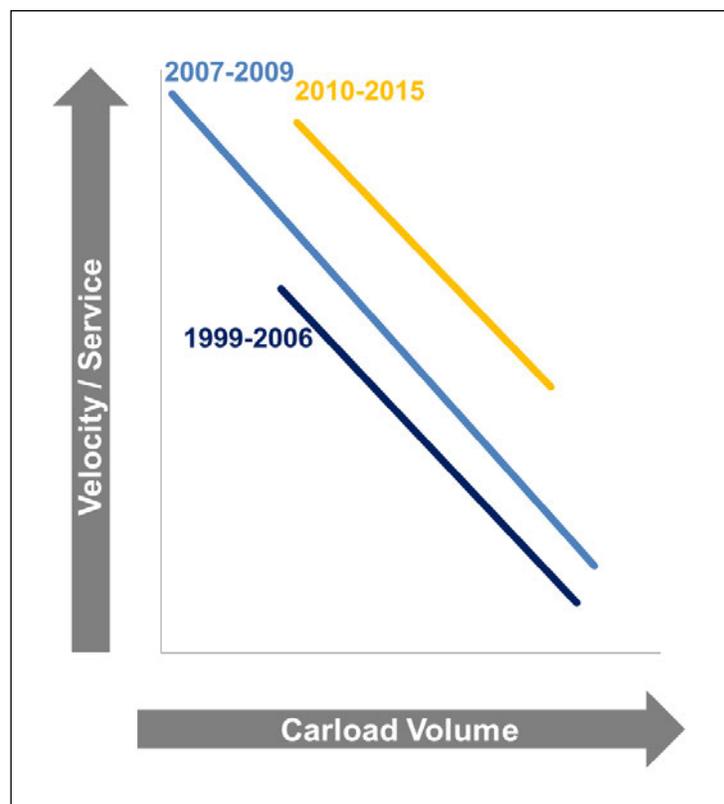
I. OVERVIEW

Union Pacific is operating at record high levels of safety and service, delivering strong value to our customers. Our performance today is due in large part to regulatory policies that have allowed us to invest in our network and to plan the flow of traffic over our network. By coordinating our investment and transportation plans, we have improved the efficiency and predictability of our network, which in turn produces better safety and service.

Union Pacific has spent the past several decades building and restructuring our network and designing transportation plans to match our resources with customer needs. These efforts have been driven by a strategic vision of a network that would deliver the benefits of single-line service made possible by the mergers that created today's Union Pacific, and by the necessities of responding to the changing demands of our customers. We aligned our capital spending with our basic operating strategy of concentrating traffic where possible on higher-capacity, higher-density corridors. We developed train plans and car blocking plans so traffic can bypass yards, reducing time-consuming interchanges. We removed or downsized yards we no longer needed, while at the same time we invested in modernizing and increasing the productivity of the remaining yards and terminal facilities that now handle increased volumes of traffic.

Union Pacific's service design and capital planning continue to focus on the basic goal of producing fewer, larger trains, with the fewest possible stops for switching or other work events. This allows us to make the most productive use of our locomotives and crews, reduces car cycle time, and increases the total amount of freight we can move. By reducing stops en route and terminal switching, we reduce safety risks, costs, and delay.

Our continuing investments in our network and our focus on efficient traffic movements are enabling us to move more freight at better service levels than ever before. The figure below shows how our process has allowed us to move the relationship between average volume and average velocity up and to the right, which means we are moving more freight, faster.



The Board's proposal to promote the use of forced reciprocal switching is fundamentally inconsistent with the principles we have followed to produce our current high levels of service.

As I explain below, introducing new reciprocal switching events would create inefficiency and delay, and it would disrupt operations, with potentially devastating consequences for shippers. Forced switching would also undermine the benefits of our past investments in our operations and reduce our ability to plan and invest for the future. The Board's belief that it can avoid these harmful impacts through a case-by-case review of forced switching requests is misplaced. Union Pacific's investment decisions will be affected regardless of whether any shipper ever requests forced switching, and the most severe operational consequences may not be fully apparent until after the tipping point has been reached.

II. FORCED SWITCHING WOULD CREATE INEFFICIENCY AND DEGRADE SERVICE.

Forced reciprocal shipping would have immediate, harmful impacts on Union Pacific's service that would affect all our customers, not just those that use forced switching. The impacts could become severe, with overcrowded terminals and changing service patterns creating a risk of cascading failures. In addition, our ability to restore network fluidity would be hampered because forced switching creates greater challenges than typical service disruptions.

A. Impacts from Additional Handling in Yards Where Forced Switching Occurs

Forced switching would inevitably create inefficiency because more time and more resources would be required to provide the same amount of service. Every car subject to forced switching would require extra switching in yards, which typically means 24 to 48 hours of delay for each affected car movement between railroads. From the time empty cars arrive in a terminal until loaded cars depart, reciprocal switching would typically add 48 to 96 extra hours of delay, because every car subject to reciprocal switching must traverse the terminal area twice, moving

empty from one railroad's yard to the other railroad's yard, then returning after loading.¹ During this time, affected cars would remain in yards, consuming capacity and interfering with service to other customers. Often, the delays would be longer, since these movements cannot occur until the receiving railroad has capacity to accept the cars.² The delays and extra movements not only increase transit time, they also reduce service consistency and reliability. Eliminating these delays and increasing service reliability are the main benefits of single-line service.

Forced switching would be bad enough if the harms could be confined to the shippers that use forced switching, but the impacts would spread to other customers in the terminal and across our network. The terminal capacity no longer exists to support a substantial increase in forced switching. Even in terminals where two railroads already reciprocally switch some cars, the extra time that the additional cars would remain in yards would increase car inventory and consume capacity we use to serve other customers efficiently. This would be an even greater problem in our terminals that are already near capacity, or that are especially subject to traffic surges and other disruptions. Cars that would otherwise depart on through trains would instead be hauled from one railroad's yard to another railroad's yard, unnecessarily creating additional congestion. In addition, because switching increases car cycles time, the shippers that use forced switching would need more cars to move the same volume of traffic, which would add even more cars to the network. This can become a vicious cycle that leads to gridlock. As car

¹ In my March 26, 2014 testimony in Ex Parte No. 711, I presented a series of slides that illustrate why forced switching adds work, complexity, and delay to rail operations. *See* [https://www.stb.gov/Filings/all.nsf/d6ef3e0bc7fe3c6085256fe1004f61cb/6fe855920c7a87ed85257ca900410ed6/\\$FILE/235710.pdf](https://www.stb.gov/Filings/all.nsf/d6ef3e0bc7fe3c6085256fe1004f61cb/6fe855920c7a87ed85257ca900410ed6/$FILE/235710.pdf).

² The same is true for reciprocal switching at destinations, except that the inbound load moves from the line-haul railroad's yard to the switching railroad's yard before the car returns empty after unloading.

inventory increases, network velocity slows, thus degrading service to other shippers, who would also need more cars. Harsh experiences from the past have demonstrated how quickly congestion in one terminal can spread and disrupt service in other parts of the network.

Forced switching would also have a significant impact on our operations because it would reduce our ability to monitor and control the flow of inbound traffic to prevent congestion. We have made great strides in reducing car dwell times in yards by developing car management technologies that allow us to match the flow of cars to and from customer facilities with the track capacity at those facilities. However, we cannot monitor or control the flow of loaded or empty railcars coming to us for reciprocal switching—we cannot tell the line-haul railroad to shut off the flow at its source, and we have little choice but to accept cars in reciprocal switching even when a customer's tracks are full, because the cars are typically being delivered with cars for other customers. That means we would be left holding cars in our yards that cannot be delivered. The cars would consume extra resources and interfere with our ability to provide timely service to other customers, potentially creating a downward spiral of increasing congestion and decreasing yard throughput.

B. Impacts from Reductions in Traffic Density and Changes to Operating Plans

Shippers that use forced switching would also degrade service to other shippers because they would be diverting traffic that we use to build through trains to more distant destinations and blocks of cars that bypass intermediate switch yards. As a freight railroad, our fundamental technology is to gather rail cars, sort them by destination, place them in trains, then move the trains as far as possible before we have to re-sort the cars. The farther we can move our trains without stopping to re-sort cars, the better it is for efficiency, productivity, and service to our customers.

The key to moving trains farther without stopping to re-sort cars is traffic density. With more density, we can move cars farther without stopping for additional sorting that causes delay, increases costs, increases the risk of damage to freight, and reduces consistency and reliability. Over the past several decades, we invested billions of dollars in our network, and we continue to invest heavily in our network, to maximize traffic density and allow for uninterrupted movement. With more density and longer uninterrupted movements, we not only provide better service to customers, but we also keep our locomotives in service more of the time, schedule our train crews more effectively and efficiently, improve utilization of our track assets, and spread the fixed costs of our network over more shipments.

Forced switching would undermine our efforts to build density. It would fragment traffic into smaller volumes, and that means more stopping and more sorting. For example, today we have enough cars moving from Houston to Southern California to build trains in Englewood Yard in Houston and run them 1600 miles without stopping to West Colton Yard in Los Angeles. If we did not have enough density to build trains for West Colton, we would have to combine West Colton cars with cars moving to intermediate points, such as El Paso and Tucson. As a result, we would need to stop en route to further sort cars for West Colton and combine them with traffic for other destinations. Similarly, today we have enough cars moving from Houston to St. Louis to build solid blocks of cars in Houston yards and combine them into solid trains for St. Louis without further sorting en route. If we did not have that density, we would have to send these cars to Little Rock to switch again and combine them with enough cars from other origins for a St. Louis train.

Changing our operating plan in response to lower traffic densities would unravel the efficiencies we have been working so hard to build and would increase our operating costs. It

would also add transit time and costs for our customers. All cars on trains from Houston to California would be delayed if the trains must stop in El Paso and Tucson. All cars on trains from Houston to St. Louis would be delayed if they had to be further sorted and consolidated in Little Rock. Our shippers would experience longer car cycle times, and their equipment costs would increase.

Changing our operating plans to adjust to lower traffic densities would also leave us with increased demands on capacity on portions of our network and stranded investments on other parts of our network. However, in many places where we would see higher demands to perform more intermediate switching, the infrastructure we would need no longer exists—as I explained above, as we developed train plans to bypass yards, we removed or downsized many yards we no longer needed.³ Moreover, we would be much less likely to make new investments in yard capacity under a forced switching regime, as I discuss in Part III.

C. Forced Switching Creates Very Different Challenges than Normal Traffic Fluctuations

If forced switching were to cause yard congestion or operational gridlock, Union Pacific would adjust its operations in an effort to restore fluidity, as we have adjusted to changing traffic patterns and congestion on many occasions in the past. But forced switching creates a new level of challenges to achieving recovery.

First, in the case of forced switching, we would be left operating less efficiently than before. There would never be a complete recovery. Even after restoring fluidity, we would be using more resources than necessary to handle a given amount of traffic.

³ Appendix C to Union Pacific's comments in this proceeding contains a discussion of how Union Pacific closed and repurposed yards in Kansas City. *See* App. C at 19-20.

Second, forced switching would leave our network continually vulnerable to a new source of disruption as shippers in different locations seek forced switching whenever they believe it would provide them with an advantage. This would consume resources we normally use to respond to surges in traffic caused by changes in market conditions or disruptions caused by weather events.

Third, we could not mitigate the impacts of forced switching through the processes we normally use to try to anticipate and adjust for changes in traffic patterns. Today, Union Pacific works with customers to forecast demand and design service plans to accommodate anticipated changes in demand. A customer's use of forced switching will likely come with less visibility than a change in market conditions, and once a customer gains the right to forced switching, there appears to be no constraint on a customer's ability to shift traffic between carriers. We strive to be agile enough to handle sporadic, unplanned service disruptions, but forced switching would introduce a level of challenge that does not exist today.

Fourth, one important way that we adjust to changing traffic patterns and congestion is by investing capital in our network. As I discuss in more detail in the next section, under a forced switching regime, our capital investment would be reduced, and we would have no incentive to undertake projects that would make it more attractive for our customer to seek forced switching.

In the earlier phase of this proceeding, Union Pacific filed comments that illustrated the impacts of forced switching on service and efficiency by focusing on the potential consequences for operations at three locations—Houston, Kansas City, and Sioux City. I urge the Board to review those materials, which are attached as Appendix C to Union Pacific's comments in this proceeding, to gain a better understanding of how the general concerns I describe above would apply to actual operations on our network.

III. FORCED SWITCHING WOULD REDUCE OUR ABILITY TO PLAN AND INVEST FOR THE FUTURE.

As I discuss above, Union Pacific's service design and capital planning processes are closely interconnected. We cannot execute our transportation plan unless we have the necessary assets in the right locations. We must plan our capital investments and our operations carefully. The investments we make to expand and enhance our network are very expensive, require long lead times, and last for decades. Most track and terminal expansion projects take at least three years, and often five or more years, from concept to operation. We must design the project, gain community support, secure property, address permitting issues, and relocate roads and utilities before we can even begin construction.

Forced switching could have substantial impact on our past capital investments that support our current transportation plans. Forced switching could reroute traffic from routes and facilities where we invested billions of dollars to consolidate six smaller railroads into the current Union Pacific.⁴ Our customers have benefitted tremendously from these investments and continue to benefit not only from improved access to additional markets, but also from the faster transit times, improved reliability, and other efficiencies that we created in building a railroad that maximizes single-line service. These efficiency-enhancing investments did not end with the implementation of our mergers. We have continued to invest billions of dollars in pursuit of our basic operating strategy of concentrating traffic on higher-capacity, higher-density corridors with minimal sorting events. Forced switching could divert traffic away from assets in which we have made significant investments, leaving them underutilized and reducing the returns on those investments.

⁴ Appendix B to Union Pacific's comments in this proceeding describes numerous examples of such investments and how they delivered benefits. *See* App. B at 31-55.

Forced switching would have even more serious consequences for future investment. In the capital planning process, a project will not be undertaken unless we will see an adequate return on the investment. As Jon Panzer, Union Pacific's Vice President – Financial Planning and Analysis, explains in his statement, the hurdle rate of return on capacity projects must be higher than our cost of capital due to the risk that we will not achieve the anticipated returns. This return is almost always a result of traffic that the investment will allow us to move. To justify an investment, we must either make more money by moving more traffic or save money by moving traffic more efficiently. As an example, my capacity planning team might suggest adding capacity in a terminal that becomes congested. But if we looked at the terminal and determined that the congestion was a result of forced switching, so Union Pacific was losing line-haul revenue on the traffic that was being switched, it would be difficult, if not impossible, for a capital project in that terminal to show an adequate return. In fact, I would be extremely concerned that by investing in the terminal we might be encouraging even more use of forced switching—that our investment would end up further reducing our revenue, subsidizing our competitor's service, and facilitating the creation of additional inefficiency and greater congestion in the terminal.

I would have the same concerns about investing in a terminal even if forced switching were not the cause of congestion. If shippers in the terminal *could* invoke forced switching, I would be concerned that our investment to create additional capacity would encourage one or more shippers to invoke forced switching, depriving us of the line-haul revenue that we were counting on to justify the investment, while increasing our operating costs.

A forced switching regime would make it even more difficult than it is today to engage in capacity planning or to fund any capacity projects, not just those projects involving terminals. In

making capacity planning and funding decisions, our ability to forecast changes in traffic levels and traffic patterns is critical because of the long lead times that are required to put facilities and equipment in place. Forecasting changes in traffic is difficult enough as it is. Under the current regulatory regime, we know that customers we serve exclusively will ship their rail traffic over our lines. We rely on this fact in evaluating potential capacity investments on our lines and in our yards, and in considering changing our operating plans or hiring and training additional crews for particular locations. Under a forced switching regime, however, we would have no assurance that customers that could invoke forced switching would keep their rail traffic on our lines. We cannot shift our investments as quickly as shippers could invoke forced switching. Once our capital dollars are spent, most of them cannot be removed from the ground. Even if shippers invoke forced switching only rarely, the reduced predictability of future traffic flows would increase our investment risks, and the attractiveness of most investments would decline.

IV. THE BOARD'S CONFIDENCE IN A CASE-BY-CASE EVALUATION OF INVESTMENT AND OPERATING IMPACTS IS MISPLACED.

I understand that the Board believes it could avoid the harms to investment and service that forced switching would create by evaluating forced switching requests on a case-by-case basis. The Board's belief reflects an unrealistic view of how the prospect of forced switching would affect investment and service.

We invest today based on what we believe our business will look like in the next three to five years and beyond. As I described above, we must make capital investment decisions based on forecasts of future traffic levels because of the long lead times involved and because once we begin a project, most of the investment cannot be reversed. Our reliance on forecasts means we must consider the risks that the returns we could potentially receive from a project—the returns

necessary to justify the project—might fail to materialize for any number of reasons. If the risks are too great, we will not make the investment—we cannot wait to see whether the risks actually materialize.

Under a forced switching regime, we would have to consider an important, additional risk that we would not obtain the necessary returns—we would have to factor in the possibility that some shippers might invoke forced switching before we can recoup the value of our investment or that the investment might encourage one or more customers at nearby locations to seek forced switching. As a result, under a forced switching regime, almost every investment would be more risky, and we would make fewer investments. The reduction in investment is inevitable—it occurs whenever forced switching is a future possibility. The Board’s proposed case-by-case approach would make no difference because we would have made our decision not to pursue a project long before any shipper actually invoked forced switching.

The Board’s proposed case-by-case approach also would make no difference when we consider investing in a capacity project *after* the Board authorizes forced switching. I provided an example above of how we might reject an investment in a congested terminal because much of the traffic was moving under forced switching. Had there been no forced switching, we might have been able to justify an investment that would have benefitted all of the shippers using the terminal. However, the Board’s proposal does not allow for a retroactive case-by-case analysis, and with the forced switching in place, the investment never will be made. Similar situations could arise all across our network—investments that would benefit shippers that do not use forced switching may never occur because traffic for other shippers has been diverted through forced switching.

I am particularly concerned about the impact of a forced switching regime on investment in terminals. Today, most of our terminals have sufficient capacity to handle existing traffic and accommodate near-term demand fluctuations and typical weather events. However, forecasts suggest that we may soon face capacity challenges in many terminals—especially in our Southern Region where substantial volumes of carloads in Texas and Louisiana would be exposed under the proposed rules. We will be hard pressed to meet those challenges. Terminals are typically located in congested urban areas, and many are now surrounded by development. They are very expensive to expand, if they can be expanded at all. Forced switching would place significant additional demands on our terminal capacity—the additional switching could push us beyond our capacity tipping point in many terminals—while making already expensive investments more risky and even less attractive. Given the railroad industry’s experiences with service problems that start in terminals and spread across the network, this is a major concern.

Moreover, I do not believe the Board will be able to address the potential service impacts of forced switching through a case-by-case approach. The idea that the Board even needs a case-by-case approach to evaluate the service-related impacts of forced switching makes little sense. As I explain above, forced switching would degrade service. Forced switching would add time and costs to the movement of each directly affected shipment, and it would increase terminal congestion and reduce the overall efficiency of network operations, harming service to other customers as well.

In addition, a case-by-case approach would not identify the cumulative impacts of forced switching on service, or the impacts that become clear only as traffic volumes change over time. In some cases, we might be able to show that loss of traffic from a single shipper seeking forced switching would disrupt our service plan—for example, that we would no longer have sufficient

volume to build a train that runs through an intermediate terminal—thus harming other users of the service. In other cases, however, we would only change our service plan after experiencing the cumulative loss of traffic from several shippers that use forced switching. In that situation, we might struggle to attribute the service impact to the final shipper to seek forced switching—particularly if it is unclear how much traffic would be lost. In still other cases, a loss of traffic from shippers that use forced switching might not affect our service plans—until economic conditions change and we lose traffic from other shippers as well. In this last instance, if we could have maintained the more efficient service but for the loss of traffic to forced switching, then forced switching would be the cause of the service impact. This is not something that could be identified in a case-by-case analysis of any particular shipper’s request for forced switching. Similarly, a case-by-case approach could almost never identify situations where forced switching would deprive us of traffic that in the future would have helped justify our implementation of a more efficient service plan.

To the extent the Board believes its case-by-case approach would at least prevent major terminal meltdowns, it misunderstands the nature of the potential problems, which relate to the difficulty in forecasting changes in demand conditions and other events that place pressures on rail networks, and especially on operations in terminals. I suspect we would only rarely see a case in which we could point to a shipper’s forced switching request and say that it would push us over a tipping point, given the fluctuations in each individual customer’s traffic and the variability in the combined total traffic from all customers sharing a terminal.

The problems would come as overall traffic levels in a terminal increase—due to demand shifts that favor the shippers in the terminal, broad economic growth, major weather disruptions, or any number of factors. It would be when terminal capacity becomes tight that the congestion-

adding, resource-consuming impacts of an accumulation of decisions that allowed shippers to use forced switching would most dramatically become clear. It would be where capacity would have been sufficient to handle the surge in traffic or the harsh winter weather, if our resources were not being unnecessarily consumed because of the additional car dwell time and handlings required by forced switching. This is one of the ways in which forced switching would cause meltdowns.

The Board's case-by-case approach does not appear to contain any mechanism that would prevent these meltdowns from occurring, or that would allow us to promptly suspend the forced switching to restore order. Once the Board allows a shipper to use forced switching, there is no limit on how much traffic such a shipper could move using forced switching, and no way to stop the flow. Using a case-by-case approach, the Board would never see these situations coming. When a shipper seeks forced switching, it will often be impossible to know how much traffic would be involved, how much that traffic might grow, how much other traffic might grow, or how traffic flows might change. As a result, we could not predict precisely when or precisely where meltdowns would occur—but they are a predictable consequence of promoting the use of forced switching in a network industry that is inherently subject to traffic surges and disruptions that can quickly spread and that can take a long time to bring back under control.

V. CONCLUSION

The Board's proposal to promote the use of forced reciprocal switching would increase the amount of work railroads must perform at origin and destination, and, by fragmenting our traffic densities, the work railroads must perform en route. This would reduce service and productivity, and would increase demand for resources and investment. At the same time, the Board's proposal would reduce capital investment by increasing the uncertainty that projects

would generate sufficient returns. Railroads would therefore be left doing more work, with less investment available to support that work. The Board is proposing a recipe for disaster, risking service deterioration and disinvestment at a time when we should be encouraging even greater use of railroad service. I urge the Board to withdraw its proposal.

VERIFICATION

I, Thomas C. Haley, declare under penalty of perjury that the foregoing statement is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on October 26, 2016.

/s/ Thomas C. Haley

BEFORE THE
SURFACE TRANSPORTATION BOARD

Docket No. EP 711 (Sub-No. 1)

RECIPROCAL SWITCHING

VERIFIED STATEMENT

OF

JON T. PANZER

VERIFIED STATEMENT

OF

JON T. PANZER

My name is Jon T. Panzer. I am Vice President – Financial Planning and Analysis for Union Pacific Railroad Company. I joined Union Pacific in 1996 and have held my current position since 2014. Since joining the railroad, I have also held Assistant Vice President positions in Chemicals and Intermodal marketing, and I have worked in Financial Reporting, Investor Relations, and Capital Budgeting. I hold a bachelor's degree in electrical engineering from the University of Nebraska-Lincoln, and a master's degree in business administration from Carnegie Mellon University.

I. Introduction

In my current position, one of my primary responsibilities is capital budgeting, which involves analyzing proposed capital investments and helping determine which projects should be funded and which should not.

I understand that the Board is proposing rules designed to increase the use of forced reciprocal switching. Under the Board's proposal, shippers that are served by a Class I railroad could force that railroad to switch their traffic to a different Class I railroad, which would handle the traffic in line-haul service.

The Board's proposal is already impacting Union Pacific's capital budgeting process. Almost every capital investment decision we make must now consider the potential risk of forced switching. If the proposal is implemented, it will reduce our capital investments, especially with regard to projects involving new capacity.

In this statement, I first describe Union Pacific's capital budgeting process. I then discuss the challenges of meeting the current and future demand for capital spending. Finally, I explain why the Board's proposal affects our analysis of capital projects and forces us to reduce capital investment.

II. The Capital Budgeting Process

Union Pacific generally classifies capital projects as either "growth" or "replacement." Growth capital projects are investments to enable the railroad to increase the volume of business we handle, improve service for customers, or increase our efficiency of operations. Replacement capital projects are investments to replace worn or depreciated assets required for the continued operation of the railroad. These projects carry relatively less risk than growth capital projects because they are intended to allow us to continue handling established traffic.

Most of my team's efforts are directed towards analyzing proposed growth capital projects. Proposals for these projects originate with either Marketing and Sales or the Operating department. In either case, these projects are proposed as a means to enable customer growth and to improve railroad service. Investment of growth capital is often necessary to meet customers' service and capacity requirements, but it is also a way to invest profits back into the company on behalf of shareholders, while earning an appropriate return. My group collaborates with counterparts from Marketing and Operations to validate the business case for each potential project and ensure that the benefits are sufficient to justify the required level of investment.

Growth capital projects require more scrutiny because they are usually associated with new sources of revenue or significant operational changes. This makes them inherently more risky than replacement projects and makes the potential benefits more difficult to evaluate. Moreover, many of the capital investments we consider are so costly that they are not expected

to generate positive returns for many years, and once the investments are made, we cannot redeploy the assets and recoup our costs.

We analyze proposed capital investments using the same financial valuation techniques and capital budgeting processes that are common at most corporations. To evaluate a proposed project that would require investment of capital, we calculate the project's expected Return on Investment ("ROI"). The expected ROI is based on the size and timing of the expected future financial benefits that are directly attributable to the project. The types of future benefits that enter into our analysis primarily include revenue growth from attracting new traffic and cost savings from implementing more efficient operations to handle existing traffic. We then consider whether the expected ROI is sufficiently high to justify the investment.

In considering whether the expected ROI for a particular project is sufficiently high to justify the investment, we ask whether the project will likely generate an ROI that sufficiently exceeds our cost of capital. The Board is familiar with the use of the railroad industry cost of capital as part of its annual revenue adequacy calculations. However, our capital investment analysis involves a very different process. The Board's annual revenue adequacy calculations measure the rate of return generated by all existing assets for our entire railroad, based on the depreciated book value of our assets—what we call our Return on Invested Capital ("ROIC"). ROIC is a measure of past performance. It is irrelevant to our decisions whether to invest in a particular project. Expected ROI is a forward-looking measure that requires us to consider the current costs of the assets in which we may invest and the expected future benefits of the proposed investment.

Union Pacific management must ultimately make a business judgment regarding what level of expected ROI is sufficiently above our cost of capital to justify a capital investment

given the expected risk and return—that is, where to set our investment “hurdle rate.” If a project’s expected ROI were below our cost of capital, our shareholders would demand that we return cash to them rather than spend it on an unpromising investment. And our hurdle rate must exceed our cost of capital by some amount because it is virtually certain that some of investments will underperform expectations. In other words, we must set our sights higher than our cost of capital to better ensure that we equal or exceed that mark on average.

To the extent we have funds available to make investments, but not enough projects that exceed our hurdle rate, our shareholders expect us to return cash to them, through dividends or share buybacks, so they can invest in other activities that have the prospect of generating higher, returns. Historically, we directed a very high percentage of revenues to capital investments. Our opportunities to improve productivity, achieve strategic benefits of mergers, and enter new markets, particularly the Powder River Basin, justified high levels of capital investment because of the high prospective returns. As I explain below, we continue to face significant demand for capital investment, but the Board’s proposals reduce expected ROIs and thus the number of viable projects.

III. The Challenges Of Meeting Current And Future Demand For Capital Spending

Union Pacific is experiencing high demand for investment in growth capital projects. In my job, one of the main challenges is to ensure that growth opportunities can reasonably be expected to produce benefits that will provide an adequate return on the investment required to achieve that growth. The importance of carefully analyzing the potential returns has increased over time as we have taken advantage of many of the lowest-cost, highest-return investment opportunities.

In the years following deregulation of the railroad industry, railroads undertook relatively few growth capital projects. Instead, railroads were focused on increasing productivity by rationalizing their networks and eliminating unprofitable line segments. Union Pacific's growth capital spending increased substantially following the Union Pacific/Southern Pacific merger, as we undertook new construction projects to connect the two rail networks and to support the then-growing demand for Powder River Basin coal. Our spending on growth capital then slowed until the mid-2000's, when rising demand supported increased rates, helping generate a level of expected returns that justified investing in new growth capital projects.

Since 2003, Union Pacific has spent over six and a half billion dollars on growth projects—such as adding new track, yard, and ramp capacity. One of the largest projects included the investment of hundreds of millions of dollars to add a second track between Southern California and El Paso on Union Pacific's Sunset Route. Since 2005, this investment has significantly increased train capacity on this critical route and improved train velocity by 42%. Another example is the installation of Centralized Traffic Control signaling and crossovers on Union Pacific's main line across Iowa. The automated signaling and the ability for trains to cross between tracks at more locations increased train capacity on this critical corridor by 50% and improved velocity by 31% since 2004.

We have continued to make growth capital investments despite a decrease in traffic volume since 2014. While our coal and intermodal volumes are down, we have seen a shift in business to other areas of the network and to other commodities. In the last several years we have invested over \$90 million in the Minneapolis/St. Paul area including yard expansion and new or extended side tracks to accommodate longer frac sand trains. On the other end of these frac sand movements in Texas, we have invested over \$37 million in the San Antonio area to support more

and longer sand trains and other traffic related to oil and gas production. We have invested more than \$85 million in the Odessa area to support oil and gas production. We also invested over \$40 million on our route between Minnesota/Wisconsin and Texas to add second main line track to our Chester Subdivision and expand our Salem Yard. We have seen steady growth in our carload business in the Gulf region since the recession, and our business with Mexico continues to rise. We see these trends continuing due to petrochemical plant expansions in Texas and Louisiana and expanding trade with Mexico, particularly in the automotive industry. We are currently undertaking numerous growth investments to accommodate these traffic shifts and expect demand for growth capital to better serve our markets and customers will continue into the foreseeable future.

Industry growth projections in other areas also indicate that changing demand for rail service will continue to drive a need for growth investment. Our customers continue to bring us a steady stream of new investment opportunities that they believe will be needed to support their growing businesses. But these new opportunities come with significant challenges. One of the most significant challenges is that the costs of adding capacity on our system, and thus the costs of accommodating new traffic, are rising. As I noted above, we have already undertaken most of the lowest-cost, highest-reward projects. For example, we have constructed sidings, crossovers, and connections where they have had the biggest impact on throughput. The low-hanging fruit is mostly gone. To make equivalent capacity improvements in the future, we will have to make more costly investments, like adding more miles of double track. The proposals we are now considering are more risky, and more costly relative to the revenues and the operating savings they are projected to generate.

Another reason investment requirements are increasing is because demand is rising in congested, metropolitan areas, especially in Texas and Louisiana, where we face high land acquisition costs and other cost factors that make construction challenging, including a large number of pipelines and environmental and permitting challenges. Chicago and California are other examples of areas with congested railroad operations where capacity expansions are often impractical or cost-prohibitive due to the absence of available land or the difficulty in modifying existing yard configurations or operations.

In short, the challenge is not finding potential opportunities to produce traffic growth and cost savings by spending growth capital, but identifying projects that generate returns sufficient to justify these increasingly expensive investments. As I discuss next, the Board's forced switching proposal is making it increasingly difficult to identify projects that merit capital investment.

IV. The Board's Forced Switching Proposal Will Reduce Capital Investment

The Board's forced switching proposal decreases the number of potential capital projects for which the expected ROI justifies investment because it reduces the expected returns from those projects. The inevitable result will be lower capital investment in our rail network.

As I have explained, when we evaluate whether to invest capital in a proposed project, we ask whether the project will generate a sufficiently high expected ROI. The question is not whether we have generated adequate revenue in the past, or even how much revenue we expect the enterprise as a whole to generate in the future. In evaluating a proposed project, the critical question is whether that project can be expected to deliver sufficiently high returns—we are focused on the costs and benefits of the investment being analyzed.

The Board's proposal to increase the use of forced switching affects our analysis of proposed projects in several ways, depending on the precise nature of the project, that inevitably increase risk, reduce expected returns, and thus reduce the likelihood that a project will be funded. Here are a few examples:

First, in many cases, the expected returns that justify a project are based in part on expectations that the project will allow us to increase revenues by attracting new business. For example, we may be considering construction or expansion of a yard to serve new customers or encourage existing customers to expand their use of our services. However, we must discount expected revenue gains from the project if a competitor could take that traffic from us using forced switching, which reduces the expected returns from the project. In addition, we must consider the possibility that our investment in improving service to a customer will actually attract a competitor, and thus we will end up not only losing traffic, but incurring even higher costs to provide forced switching.

Second, in many cases, the expected returns that justify a project are based in part on expectations that the project will allow us to reduce costs by removing a capacity constraint on current operations. For example, we may be considering construction of a cross-over, a siding, or a segment of second main line at a capacity-constrained point on our network to mitigate delays that increase our operating costs. However, we must discount expected costs savings from the project if a competitor could use forced switching to capture some or all of the traffic that is currently using the capacity-constrained asset. We must account for the possibility that traffic using the asset might shift after we invest, eliminating the need for the investment.

Third, in many cases, the expected returns that justify a project are based in part on expectations of a combination of revenue growth and costs savings. For example, we may be

considering construction of a new yard that would help us reduce operating costs by alleviating congestion in existing yards, and increase revenues by providing capacity to accommodate traffic growth. However, we must discount the expected cost savings and the expected revenue growth if a competitor could use forced switching to capture some or all of the traffic that otherwise would use the new yard, thus leaving us with an expensive, underutilized asset.

My fourth example is perhaps the most concerning: in certain cases, undertaking growth investments might provide the capacity that would make forced switching feasible, thus allowing a competitor to use the new capacity to capture our existing business. One of the Board's criteria for ordering forced switching is the feasibility of the proposed switching. Currently, there are many locations on our network where forced switching would not be feasible due to a lack of capacity. Without sufficient capacity, additional switching activity will cause degradation in service and thus further reduce capacity. But if we invest in yard or main line track in such a congested area to accommodate a customer's growth, we are potentially creating capacity that will enable that customer to argue that forced switching is operationally feasible.

Most investments are inherently risky in the sense that benefits from new business or operational improvements may not materialize as expected. However, when considering future investments under the proposed forced switching rules, we will also have to consider that the addition of capacity may also include the added risk that new capacity may be an enabling factor that causes the loss of *existing* business as well. This added level of risk means that the hurdle rate of return for all projects will be raised, with the result that fewer investments will be undertaken. Why would we invest in assets, or invest as much, if we could be forced to make those assets available to our competitors?

Union Pacific is faced with a real example of this dilemma today. We are considering a project involving the construction of new rail car storage tracks for plastic resins and associated investments in switching capacity at an adjacent rail yard. These investments are necessary to support plant expansions currently underway with several existing customers. Two competing railroads operate near the proposed site, but the ability to interchange cars between railroads is currently limited due to capacity constraints. The investments we are considering are intended to improve our ability to store, switch, and transport our customers' cars, and they include certain connecting track and sidings. However, under the proposed rules, we face a risk that we could be forced to use some of this new capacity to hand off existing and potentially new business to our competitors. If we instead choose not to make the investment, we may struggle to handle our customers' freight efficiently and with the level of service they desire, but we would also minimize the risk of losing that business entirely.

Finally, the Board should understand that its forced switching proposal will distort the market signals that would otherwise guide our investment decisions, even as we continue to invest. If one project with otherwise high expected returns carries greater regulatory risk that revenue gains or operating cost reductions will not be realized, or that costs will be increased, then that project may not be undertaken in favor of another project with otherwise lower expected returns but lower regulatory risks. For example, intermodal facilities and auto ramps are railroad facilities, not shipper facilities, and thus they appear to be beyond the scope of the Board's proposals. That means we would be more likely to invest in capital projects involving intermodal facilities and auto ramps than projects to expand or improve service to manifest traffic. In other words, the Board's proposals favor investments in certain types of traffic.

V. Conclusion

We believe that continued capital investment is critical to meeting the ever-changing demand for rail service. However, sustained high levels of capital investment are only possible if the expected returns on a project-by-project basis are sufficiently high to justify investments in our network. The Board's forced switching proposal will reduce our capital investments by reducing the expected returns from capital projects.

VERIFICATION

I, Jon T. Panzer, declare under penalty of perjury that the foregoing statement is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on October 26, 2016.

/s/ Jon T. Panzer

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

REVISED COMPETITIVE SWITCHING RULES

Docket No. EP 711

VERIFIED STATEMENT OF

PROFESSOR KEVIN M. MURPHY

OCTOBER 26, 2016

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I. ASSIGNMENT AND SUMMARY OF CONCLUSIONS

My name is Kevin M. Murphy. I am the George J. Stigler Distinguished Service Professor of Economics in the Booth School of Business and the Department of Economics at The University of Chicago, where I have taught since 1983.

I earned a doctorate degree in economics from The University of Chicago in 1986. I received my bachelor's degree, also in economics, from the University of California, Los Angeles, in 1981.

At The University of Chicago, I teach economics in both the Booth School of Business and the Department of Economics, and I am co-Chair of the Becker Friedman Institute for Research in Economics. I teach graduate level courses in microeconomics, price theory, empirical labor economics, and sports analytics. In these courses, I cover a wide range of topics, including the incentives that motivate firms and individuals, the operation of markets, the determinants of market prices, and the impacts of regulation and the legal system. Most of my teaching focuses on two things: how to use the tools of economics to understand the behavior of individuals, firms and markets; and how to apply economic analysis to data. My focus in both research and teaching has been on integrating economic principles and empirical analysis.

I have authored or co-authored more than 65 articles in a variety of areas in economics. Those articles have been published in leading scholarly and professional journals, including the *American Economic Review*, the *Journal of Law and Economics*, and the *Journal of Political Economy*.

I am a Fellow of the Econometric Society and a member of the American Academy of Arts and Sciences. In 1997, I was awarded the John Bates Clark Medal, which the American Economic Association awarded once every two years to an outstanding American economist

under the age of forty. In 2005, I was named a MacArthur Fellow, an award that provides a five-year fellowship to individuals who show exceptional merit and promise for continued and enhanced creative work. Also in 2005, I was elected a Fellow of the Society of Labor Economists.

In addition to my positions at The University of Chicago, I am also a Senior Consultant to Charles River Associates (“CRA”), a consulting firm that specializes in the application of economics to law and regulatory matters. I have consulted on a variety of antitrust, intellectual property, fraud, and other matters involving economic and legal issues, such as damages, class certification, mergers, labor practices, joint ventures, and allegations of anticompetitive exclusionary access, tying, price fixing, and price discrimination.

I have submitted testimony in Federal Court, the U.S. Senate, and to state regulatory bodies, and I have submitted expert reports in numerous cases. I have submitted testimony to the Surface Transportation Board (the “Board”) on behalf of Union Pacific Railroad Company (“Union Pacific”) and CSX Transportation, Inc., and I have testified before the Board on behalf of Union Pacific. I have also testified on behalf of the U.S. Federal Trade Commission, and I have consulted for the U.S. Department of Justice.

My opinions are based on information available to me as of the date of this statement. My work is on-going, and I may continue to collect data and other information relevant to the issues and opinions that I discuss in this report. In particular, I will review and, if requested to do so, respond to comments submitted in this proceeding by other parties.

I have been asked by Union Pacific to review the Board’s Notice of Proposed Rulemaking in Docket No. EP 711 (Sub-No. 1), *Reciprocal Switching* (“NPRM”), and to offer my economic opinion on the Board’s proposal. In the NPRM, the Board describes its proposal

as an effort “to promote further use and availability” of reciprocal switching.¹ The Board proposes to replace current regulations, which make reciprocal switching available as a remedy for anticompetitive conduct, with new rules that vastly expand the circumstances in which the Board would find forced switching to be “in the public interest” or “necessary to provide competitive rail service.”²

I have concluded that the proposed rules are not supported by economics. Economic analysis demonstrates that the public interest is served by allowing competition to determine whether a railroad grants access to its facilities and, if so, at what price. If regulators allow a railroad’s shippers or competitors to obtain access to a railroad’s assets where such access is not necessary to remedy anticompetitive conduct, the result will be reduced railroad investment, reduced economic efficiency, and degraded service for shippers. In short, I have concluded that the Board’s proposed rules will harm competition and consumers.

Below, I first provide a brief overview of the general economic principles that guide my analysis of the Board’s proposal. I then discuss the harmful economic consequences of adopting the Board’s proposal.

II. GENERAL ECONOMIC PRINCIPLES FOR EVALUATING THE BOARD’S NEW RECIPROCAL SWITCHING PROPOSAL

A. The Marketplace, Not Regulators, Most Effectively Allocates Resources and Sets Prices

When outcomes are market determined, forces of supply and demand work to allocate scarce capacity and resources efficiently. Higher margins resulting from increased demand for

¹ NPRM at 16.

² NPRM at 17-19.

rail transportation provide incentives to make additional investments to help meet that demand. Regulatory interference with market outcomes, even if well-intentioned, can cause substantial economic harm by overriding and distorting incentives for the efficient investment in and use of rail assets.

The risks created by regulatory interference are especially strong in network industries. The large amount of interaction among customers served using shared assets and costs means that investment in or operational adjustments to one part of the rail network will affect many rail customers, including many distant customers. In the railroad industry, a misplaced effort to reduce one shipper's rates not only reduces investment that would benefit that shipper, but can deter efficient investments and result in general deterioration of railroad service for all shippers that also would benefit from those investments. This is an important, but less obvious cost of regulation.

The history of the railroad industry illustrates the dangers of well-intentioned regulation. The industry's long deterioration was reversed only after passage of the Staggers Act and implementation of deregulatory policies that allowed market forces to guide railroad pricing and investment decisions, and that gave the railroads incentives to make long-range plans to strengthen their networks with tens of billions of dollars of investments on which they could expect to earn competitive returns over the long life of those assets.³ Deregulation reduced the uncertainty faced by railroads about how regulatory interventions might interfere with their operations.

³ See 49 U.S.C. § 10101 (Rail transportation policy).

B. Regulation Potentially Should be Used Only Where the Absence of Effective Competition Results in a Market Failure

Where an absence of effective competition results in anticompetitive conduct by railroads, some regulation may be appropriate to attempt to replicate outcomes that would be produced by a competitive market. However, regulators should require rigorous analysis and evidence before they conclude that effective competition is absent and that there is a market failure that can be overcome or ameliorated through regulatory intervention. For example, where only a single railroad serves a shipper's facility, this generally is an efficient outcome of a competitive market and not evidence of market failure. The sole railroad's rates and services generally are constrained by competitive alternatives, even if entry of a second railroad is not efficient.

Moreover, regulators should recognize that effective competition means more than the presence of another entity that could precisely replicate the service at issue. In the rail industry, effective competition is not limited to intramodal or intermodal competition because "product and geographic competition can provide effective alternatives,"⁴ as the Board recognizes. As I discuss in more detail below, a comprehensive evaluation of effective competitive alternatives is even more important in reciprocal switching cases than rate cases, because the consequences of wrongly imposing forced switching are far more serious and wide-reaching than wrongly imposing regulated rates.

Even where there is a lack of effective competition, regulation is unwarranted unless a railroad charges rates above a competitive level or engages in anticompetitive conduct. If there is no market failure and regulators attempt to impose a market structure they might prefer, but

⁴ *Market Dominance Determinations*, 5 S.T.B. 492, 493 (2001).

that markets would not produce—which is what the standards in the NPRM would permit—they can cause substantial harm.

C. If the Board Identifies a Market Failure and Decides to Regulate, It Should Seek to Replicate Outcomes that Would Be Produced by a Competitive Market.

Where a market failure might justify regulatory intervention, regulators should attempt to replicate competitive outcomes—to interfere no more than necessary to eliminate the specific harm. The Board’s current rules for rate cases and forced switching correctly equate the “public interest” with correcting an identified market failure and achieving market-based outcomes.

Under the Board’s rules for rate cases, a shipper that alleges that a railroad is charging an unreasonable rate first must show that market forces may not be sufficient to bring about competitive rates. If that showing is made, the Board then determines whether the rate actually exceeds a competitive level by applying its Stand Alone Cost (“SAC”) test.⁵ Notably, the SAC test does not require a railroad to price at marginal cost, nor does the Board set rates at the maximum lawful level or any particular rate. Rather, the SAC test embraces the concept of differential pricing and establishes a rate ceiling below which railroads are expected to price according to market demand.

Under the Board’s current rules for forced reciprocal switching, a shipper can be granted forced switching access to a second railroad only by showing that the serving carrier has engaged

⁵ In some cases the shipper can invoke a simplified test. *See Simplified Standards for Rail Rate Cases*, EP 646 (Sub-No. 1) (STB served Sept. 5, 2007).

in other forms of anticompetitive conduct so that the shipper is receiving “inadequate service.”⁶⁷ Eliminating the harm from demonstrated anticompetitive conduct may then justify risking the costs associated with forced switching.

However, as I now explain, the objective underlying the Board’s proposal in the NPRM instead appears intended to restructure rail markets even when there is no market failure. This would disrupt marketplace outcomes to the detriment of shippers and consumers.

III. THE BOARD’S PROPOSAL WILL HARM SHIPPERS AND RAILROADS BY DISRUPTING COMPETITIVE MARKET OUTCOMES

Congress enacted the Staggers Act more than 35 years ago, after concluding that the nation’s railroad industry could become financially sound, efficient and responsive to shippers’ current and anticipated needs only if railroads were given greater freedom to enter and exit markets, price their services, and structure their networks and operations, including their interactions with other railroads and other modes of transportation. The well-documented and highly lauded ways in which both shippers and railroads have benefited because Congress and the Board gave railroads the ability to make their own decisions—and to benefit and suffer from the results—shows that Congressional goals are being achieved.⁸

⁶ *Midtec Paper Corp. v. Chicago & N.W. Transp. Co.* 3 I.C.C.2d 171, 181 (1986), *aff’d sub nom. Midtec Paper Corp. v. United States*, 857 F.2d 1487 (D.C. Cir. 1988); *see also id.* at 173-74 (discussing “classical categories of competitive abuse: foreclosure, refusal to deal; price squeeze; or any other recognizable forms of monopolization or predation”).

⁷ Under the Board’s rules in forced access cases, shippers need not show an absence of effective competition, but parties may introduce evidence regarding the presence or absence of effective competition, including geographic competition. *See* 49 C.F.R. § 1144.2.(b)(2) (“If a railroad wishes to rely in any way on geographic competition, it will have the burden of proving the existence of effective geographic competition by clear and convincing evidence.”).

⁸ In 2005, the U.S. Department of Transportation (“DOT”) commented that “The Staggers Act was the most important legislation in a series of major railroad reform and deregulatory measures . . . twenty-five years later, it is clear to the Department that this legislation has been a resounding success. The major railroads are financially healthy, the industry infrastructure has been modernized, productivity is high, safety is improved, and shippers have

The NPRM proposes to abandon a significant aspect of the deregulatory path chosen by Congress and implemented by the Board and its predecessor agency, the ICC. The Board has recognized that its authority to require forced switching when it is “in the public interest” or “necessary to provide competitive rail service”⁹ justifies regulatory intervention in rail access decisions only where “some competitive failure occurs.”¹⁰ In the NPRM, however, the Board proposes to redefine the statutory “in the public interest” and “necessary to provide competitive rail service” standards to require railroads to open their networks to competitors even where railroads have not engaged in anticompetitive conduct—a dramatic abandonment of its prior policy.¹¹

The Board’s proposal will harm shippers and railroads by allowing regulators to override market outcomes where there has been no market failure. When regulators attempt to impose outcomes that they consider better for consumers, even if those outcomes would not result from the competitive process, then they destroy incentives for competitive conduct and the benefits to consumers that result. If railroads fear that, despite acting competitively, the Board might decide that the “public interest” is better served by forcing access, it will reduce incentives for strong competition to win customers, including incentives to invest in better equipment and

enjoyed the benefits of lower average rates” (Statement of the United States Department of Transportation, *The 25th Anniversary of the Staggers Rail Act of 1980: A Review and Look Ahead STB Ex Parte No. 658*, at 1). DOT also explained that “[t]he Staggers Act has encouraged rail investment because it is based on sound economic principles. To its credit, the STB’s implementation of this legislation has enforced these principles and has provided a healthy balance that resulted in freight rail growth. This regulatory stability over the past 25 years was crucial to railroad investment. Continued consistent application of the Act’s economic principles will help sustain investment to handle projected increases in rail traffic.” (Id. at 3). See also, B. K. Eakin et al., “Railroad Performance under the Staggers Act,” *Regulation* (Winter 2010-11) 32 (“The Staggers Act has lived up to its promise, delivering early, substantially, and over a long period of time” (at 38)).

⁹ 49 U.S.C. § 11102(c)(1).

¹⁰ NPRM at 3 (quoting *Midtec Paper Corp. v. Chicago & N.W. Transp. Co.*, 3 I.C.C.2d 171, 174 (1986)).

¹¹ NPRM at 19.

infrastructure to win the traffic from other railroads or other modes of transportation in the first instance. History in this industry has made clear that, when regulators attempt to override competitive outcomes by imposing pricing, investment and operational requirements that the regulators think improve upon market outcomes, the industry and its customers suffer.

A. Forced Switching Will Reduce Incentives to Invest

The public interest is not served when regulators can force a firm that is not engaged in anticompetitive conduct to share its assets with a potential competitor on terms upon which the parties would not agree voluntarily. A basic tenet of competitive markets is that a firm owns the assets it creates, and that those assets cannot be used by others absent mutual consent, even when it might seem that it would increase competition to force the firm to share. Thus, General Motors is the only firm that can use an assembly plant built by GM. GM locates its plants and decides how to utilize them without considering whether, once the plant is built, Ford Motor Company will demand to use the plant for a third shift if GM operates only two shifts. Even if, ex post, GM has made an investment that could be used by another firm to better compete, GM has the right to deny access.

The same principle applies here. In locating and designing its terminals, deciding where to increase track capacity, and determining what other investments to make, a railroad should be motivated only by concerns about how such investments will enable it to compete better—to keep and win business traditionally shipped by rail as well as to win business from other

transportation modes. If a railroad must take into account how its assets might be made available for the use of competing railroads, then it will make inefficient investment decisions.¹²

The railroad industry requires enormous ongoing investments to meet shippers' demands.

As UP reported,

During 2015, UP's capital program totaled \$4.3 billion, including more than \$2 billion in replacement capital to harden infrastructure and improve the safety and resiliency of the network. Additional replacement capital consisted of locomotive upgrades and rebuilds, improvements to service facilities, along with replacements / upgrades of freight cars and other assets. Beyond replacement capital, we also continued to advance our service, growth and productivity initiatives through our investments in capacity, commercial facilities, and equipment acquisitions. Growth spending included more than \$400 million of capacity and commercial facilities investments in the Southern Region to support our diverse book of business in that region.¹³

UP determines where and how much to invest based on the expected rate of return on possible projects.¹⁴ Price and quality signals generated by supply and demand—such as rising rates resulting from congestion in one part of the network or delays caused by increased demands for access to terminals and interchange services—inform UP about where it should invest to increase capacity or improve service. If UP's rate of return is reduced because other railroads obtain the benefits of UP's investments through forced switching, then UP will invest less. The result will be harm to all shippers served directly and indirectly by those facilities. This is

¹² In his Verified Statement, Jon Panzer, UP's Vice President – Financial Planning and Analysis, explains how such strategic consideration will affect Union Pacific's decisions about capital budgeting to the detriment of its customers. See Opening Comments and Evidence of Union Pacific Railroad Company, Verified Statement of Jon T. Panzer, *Reciprocal Switching*, EP 711 (Sub-No. 1) (October 26, 2016) ("Panzer Statement") at 9 ("when considering future investments under the proposed forced switching rules, we will also have to consider that the addition of capacity may also include the added risk that new capacity may be an enabling factor that causes the loss of *existing* business as well. This added level of risk means that the hurdle rate of return for all projects will be raised with the result that fewer investments will be undertaken"). In particular, he uses the example of UP's possible investment in new rail car storage tracks for plastic resins and associated investments in switching capacity to illustrate how forced access reduces incentives for investments out of concern that competitors could then demand access.

¹³ UP 2015 Factbook (http://www.up.com/cs/groups/public/@uprr/@investor/documents/investordocuments/pdf_up_invest_2015_factbook.pdf).

¹⁴ See Panzer Statement at 7.

inevitable when the efficient pricing of access changes in ways that markets will respond to, but regulators cannot.

Importantly, forced switching provides shippers and competing railroads with a free option on the investments that UP and other incumbent railroads make, which reduces the expected return on investment, even if access is priced so the incumbent railroad is indifferent as to whether it handles a particular line-haul or just provides switching. Assume, for example, that a shipper successfully petitions for forced switching at a UP terminal in Texas, and that, because of the increased demand for switching services and resulting congestion, UP considers making additional investments in order to continue to serve its own customers well while also providing the mandated switching service. If demand were then to decline and the shipper no longer requested switching service, UP would bear the full cost of the stranded investment, which it had made in part to benefit another railroad and its customers.¹⁵ Those parties can simply walk away if they no longer want switching services. While UP might have been willing to make the investment if it served that traffic—knowing it would benefit from the upside (potentially higher rates if demand expanded unexpectedly)—it will be less willing to make the investment if upside benefits must be shared with the railroad granted access but UP bears all the downside risk because the railroad granted access does not suffer the consequences when demand falls.¹⁶ If

¹⁵ Even if the Board initially concludes that the incumbent railroad is market dominant and there is no effective competition, demand for rail service (and access) could fall if competition from other transportation modes (or increased product or geographic competition) increases or there is an economic downturn and decline in demand. All the sunk costs of unneeded investment would fall on the incumbent railroad.

¹⁶ As economists have explained, the adverse impact on investment from ignoring sunk costs and irreversible investments infects regulation of rates and access generally (*see*, J. Hausman and S. Myers, “Regulating the United States Railroads: The Effect of Sunk Costs and Asymmetric Risk,” 22 *J. Regulatory Economics* 287 (2002) and R. S. Pindyck, “Pricing Capital under Mandatory Unbundling and Facilities Sharing,” NBER Working Paper 11225 (March 2005)).

railroads lacks the incentives to make investments they would make in a competitive market, it is ultimately their customers that will suffer.

B. Forced Switching Will Create Inefficiencies in Railroad Operations

All else equal, economic efficiency requires the use of the fewest possible resources to produce a unit of output. In the railroad industry, this means the use of the most efficient combination of labor, equipment, and infrastructure to deliver shipments from their origin to their destination. The public interest is not served when regulators force firms to make less efficient use of their resources.

When firms operate in competitive markets, they are under continual pressure to become more efficient or risk losing business to competitors. I explained in prior testimony submitted to the Board that UP and other railroads have taken advantage of the operational flexibility provided by the Staggers Act to eliminate inefficient operations and unnecessary assets through mergers and improved operations, thereby reducing their costs and increasing their productivity.¹⁷ These market-driven investments improved the railroads' ability to capture and retain traffic and to become more profitable. UP has achieved dramatic productivity growth and has increased the average amount of freight moved per employee and per mile of track operated by investing to rationalize and improve its assets and operations.

Forced switching will undo railroads' success in eliminating operational inefficiencies and create new inefficiencies. As UP's Thomas Haley, Vice President - Network Planning and Operations, explains in his Verified Statement, forced switching is inherently inefficient because

¹⁷ See Opening Comments of Union Pacific Railroad Company, Verified Statement of Kevin M. Murphy, *Railroad Revenue Adequacy*, EP 722 ("Murphy Statement") (Sept. 5, 2014).

more resources are required to move the same amount of traffic from origin to destination than with single-carrier service.¹⁸ The extra handling required for cars moving in forced switching unnecessarily consumes locomotive and crew time, yard capacity, and rail cars, which also imposes costs on other traffic in a terminal. As Mr. Haley also explains, by diverting some of UP's traffic to other railroads, forced switching reduces the overall efficiency of network operations that has allowed UP to operate fewer, larger trains with fewer work events. As efficient operations are disrupted, UP might once again need some of the yard assets it has been able to eliminate since passage of the Staggers Act.

In short, forced switching would recreate inefficiencies that railroads eliminated from their networks once they were freed to respond to market forces by the Staggers Act, thereby making railroads less effective competitors against trucks and other modes.

C. Forced Switching Will Disrupt Competitive Pricing

The public interest is not served when a regulator can force a firm that is not engaged in anticompetitive conduct to set prices below competitive levels. Currently, a shipper can bring a rate proceeding and obtain rate relief if it first can demonstrate that the railroad lacks effective competition for the transportation at issue (that the railroad is market dominant) and then also can show that the rail rate exceeds the rate that the railroad would charge in a competitive market. The motivation for the Board's forced access proposal might be to provide another avenue for a shipper that believes it is being overcharged by a railroad to obtain relief. By petitioning for forced access, a shipper would not have to satisfy the SAC test requirement to demonstrate that its rate is too high, and would not even have to provide evidence of market

¹⁸ Opening Comments and Evidence of Union Pacific Railroad Company, Verified Statement of Thomas C. Haley, *Reciprocal Switching*, EP 711 (Sub-No. 1) (October 26, 2016).

dominance under the proposed “in the public interest” test. A shipper’s threat to bring a case asking for forced access then creates incentives for the incumbent railroad to lower its rate, even if that rate is at a competitive level, simply to avoid incurring the inefficiency and harm to all its customers that would result if the Board forces access.¹⁹ However, it is inconsistent with Congressional goals of permitting competition to discipline the railroads to the extent possible to absolve a petitioner of the need to show that it has been harmed because a railroad is market dominant and has used its market power to impose rates that violate the SAC test.

Substituting forced switching for rate regulation interferes with competitive pricing. Shippers could use forced switching to obtain lower rates than would arise in a competitive market. When a shipper prevails under the SAC test, the railroad is required to set rates based on competitive market principles, which preserves the railroad’s ability to engage in demand-based differential pricing and earn adequate revenues. However, unless the access price is set to cover both the incumbent’s costs to provide the switching and its lost contribution—which itself would prove a challenging task, as I discuss below—an incumbent railroad that is forced to provide switching to a competitor could end up with a lower contribution to its fixed costs than if the shipper had prevailed in a rate case. Indeed, compared with the outcome in a competitive market, the incumbent effectively could be subsidizing its competitor through the access price, and allowing the competitor to capture business by offering the shipper rates that are below the

¹⁹ The Board’s Vice Chairman Miller appears to anticipate precisely this effect: “Indeed, it is my hope that the Board will rarely be called upon to impose the reciprocal switching remedy, but instead, that whatever final rules we adopt will merely provide a bit more incentive for carriers to ensure that their customers’ needs are being met in those instances where that is not the case. So long as a carrier meets the needs of its customers, there should be little reason for a customer to seek such a remedy.” (NPRM at 33). The greater the cost to the incumbent railroad in inefficiency across all its customers, the greater the incentive to make rate concessions, even if by doing so the resulting rate is far below the competitive level (and thus the customers’ needs are met by competitive railroad rates), simply to avoid the Board imposing forced access.

competitive level. As discussed above and in my prior testimony to the Board, requiring railroads to set rates below competitive levels will reduce incentives to invest and cause broad harm to shippers.²⁰

D. Forced Switching is an Inefficient Way to Provide Rate Relief

Using forced switching to provide rate relief will cause inefficiencies that are not created in rate cases. All else equal, if a shipper can demonstrate that, because of lack of effective competition, the sole railroad providing service is charging a noncompetitive fee (i.e., higher than a thorough SAC analysis would show was appropriate), it is more efficient for one railroad rather than two to provide service. Imposing forced switching to create a second competitor for the service in order to potentially force down the incumbent's rate is not the competitive outcome, but simply creates inefficiency that would not exist if the incumbent were required to reduce its rates.

Moreover, the harm resulting from wrongly granting forced access when rates already are competitive is greater than from improperly awarding rate relief. Access regulation can result in less efficient use of a railroad's network and assets, reducing investment incentives while potentially degrading service for a wide range of customers.

The Board likely will find a thorough forced switching proceeding to be very complex. Under the "in the public interest" test it proposes, the Board will have to determine the potential harmful consequences of a forced switching request, both in the immediate and long term, on railroad operations and investment throughout the network, and then balance those harms against the possible benefit to the shipper (which may be private, but not public interest, benefits).

²⁰ See Murphy Statement, *supra* note 17 at 29-34.

Under the “necessary to provide competitive service” test in its proposal, the Board still will have to evaluate claims of market dominance and evaluate the impact of forced switching on railroad operations. And under both tests, the Board likely will have to set the access price. Setting an efficient access price is both extremely important to avoiding the most harmful consequences of forced switching, and is extremely difficult to do.

Like regulators in general, the Board is not well-suited to make the necessary determinations regarding access. This is not because the Board’s expertise is especially limited, but because determining the consequences of a grant of forced access will be enormously complex, and efficiently pricing access to a component of a complex railroad network so as to avoid distorting investment decisions and reducing operational efficiency is even more difficult.

Furthermore, the two railroads already have an incentive to negotiate a voluntary interchange agreement if, by doing so, they can serve the customer more efficiently, because they can share in the resulting benefits (perhaps additional shipments and/or cost savings). In contrast, the Board would face enormous difficulties in evaluating whether service would be improved (to these and other customers) and setting the appropriate fee, and it is unlikely to be able to make these determinations quickly and appropriately. Since all parties have an incentive to reach efficient access agreements, there is little role for regulation to attempt to improve service quality. Forced access potentially could be a superior solution to rate regulation if, by allowing a second carrier to interchange and handle a portion of the route, service quality (e.g.,

timeliness) improves.²¹ But this is highly unlikely because, all else equal, simply increasing the resources used to deliver a shipment will reduce efficiency.

E. Efficient Access Pricing Must Compensate the Supplying Railroad for the Full Cost of Providing Access

Switching services provided on behalf of a particular shipper use the same facilities and network as services supplied to other shippers. Consequently, the efficient pricing of access to serve a particular shipper will change as demand for the facilities used changes. No “once and for all” remedy or regulated price will adjust appropriately, and setting conditional access pricing that depends on how future demands and conditions change simply expands the complexity of the challenge faced by regulators. Even if the access price were right to begin with, it is only with immense luck that the price will be right in the future. Forced access potentially could work efficiently to create benefits rather than disruption only if the access pricing can adjust with changes in the marketplace.

In contrast, access will be privately negotiated absent a regulatory mandate only when contracting can price resources effectively. The economic literature on the theory of the firm has made clear that firms have an incentive to use the market when doing so is superior to allocating resources internally, but firms will choose to allocate resources internally when market-based transactions are too costly or result in inefficient incentives for investment or use.²² Regulations that require access override this key element of voluntary negotiations and will encourage

²¹ Another hypothetical situation where forced access could have benefits is if it allows participation in the marketplace by potential innovators who would make use of access to offer new services that the incumbent would not offer. But I understand that no party has claimed that this is the rationale underlying the NPRM.

²² See, e.g., Coase, Ronald H. "The Nature of the Firm." *Economica* 4, no. 16 (1937): 386-405 and Coase, Ronald Harry, *The Firm, the Market, and the Law*, 2012 (a “firm will tend to expand until the cost of organizing an extra transaction within the firm become equal to the cost of carrying out the same transaction by means of an exchange on the open market or the costs of organizing in another firm” (at 44)).

granting access even when, absent those regulations, the parties would find it inefficient to grant and price access. The circumstances under which a third party (such as the Board) can efficiently price access will be even rarer.

If, despite the resulting inefficiency and harm to competition, the Board is determined to force access even when there is no anticompetitive conduct, it can minimize market distortion only by setting an access price that covers both the serving railroad's actual cost of providing the switching service and its lost contribution from the long-haul that would exist under competition (such as the price that would be determined by a full SAC analysis). Otherwise, scarce switching capacity will not be allocated to its highest valued use, and shippers and other railroads will demand access even when they cannot serve the ultimate customer (or other customers) as efficiently as the incumbent. A railroad's investment incentives can be even partially preserved only if it is compensated for the competitive return it must give up when providing access. But, of course, this means that efficient access pricing requires the same analysis of whether rates are noncompetitive that the Board must undertake when it conducts a rate proceeding, demonstrating yet again why current rate regulation (relying on the SAC test if market dominance is established) is both sufficient and preferred to forced access as a regulatory tool for protecting captive shippers.

IV. CONCLUSION

The public interest is served by allowing the marketplace and competition, not regulation, to determine when access is provided and at what price. The Board should not abandon the conditions under which it historically has been willing to grant access—that there is a market failure—in favor of the looser standards it now proposes. The only way to serve the public

interest is to limit regulatory interference to situations where there is a market failure and where a regulatory solution can benefit, not harm, competition.

VERIFICATION

I, Kevin M Murphy, declare under penalty of perjury that the foregoing statement is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on October 26, 2016.

/s/ Kevin M. Murphy

BEFORE THE
SURFACE TRANSPORTATION BOARD

Docket No. EP 711 (Sub-No. 1)

RECIPROCAL SWITCHING

VERIFIED STATEMENT

OF

JOSHUA D. WRIGHT

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I. Qualifications

1. My name is Joshua D. Wright. I have a Ph.D. in economics (2003) and a J.D. (2002) from UCLA. I have extensively studied industrial organization economics, competition law, and regulation's impact on competition, innovation, and consumer welfare. In addition, I have published more than 80 articles that focus on these and related topics. I am also the co-author of a leading casebook on antitrust law and competition policy. My curriculum vitae is attached to this Verified Statement as Exhibit A.

2. On January 1, 2013, the United States Senate unanimously confirmed me as a Commissioner of the Federal Trade Commission ("FTC"). The FTC is a law enforcement and regulatory authority focused on competition law and consumer protection across most sectors of the economy. In that capacity, I was frequently required to assess the impact of agency rulemaking, enforcement action, or policy changes on competition and consumers.

3. I am currently University Professor at the Antonin Scalia Law School at George Mason University, where I teach classes on economics, regulation, and competition law. I am also Executive Director of the Global Antitrust Institute at George Mason University. In connection with the Global Antitrust Institute, I teach economics to hundreds of judges and regulators from across the nation and globe each year, and am frequently invited to give lectures on economics and competition law at regulatory agencies around the world.

II. Introduction and Summary

4. In a notice of proposed rulemaking served on July 27, 2016, the Surface Transportation Board ("Board") proposed to modify its existing reciprocal switching regulations to promote the use of forced access. Under the Board's proposal, a party could obtain a forced switching order by demonstrating that "the potential benefits . . . outweigh the potential

detriments” or that intermodal and intramodal competition are “not effective.”¹ The Board also sought comments on potential access pricing rules.²

5. Union Pacific Railroad Company has asked me to assess whether the Board’s forced access switching proposal is in the public interest and to comment on potential access pricing rules.

6. The Board’s proposed forced access rules would not be in the public interest. Forced sharing of assets generally disrupts operations, decreases quality, deters innovation and investment, and destroys cost savings and efficiencies. These concerns are heightened in the railway environment, where capital- and labor-intensive processes are required to implement switching, and where negative effects can spread quickly throughout the entire network. Indeed, for these and related reasons, the Board has correctly and repeatedly recognized that significant efficiencies arise from single-line service. Increased use of forced access would put those efficiencies at risk and thereby impose costs upon the railroad industry, its customers, and the economy as a whole.

7. Under any forced access rules, the Board’s approach to access pricing must recognize that the railroad providing the switching service (“landlord railroad”) must be compensated for both the actual costs it incurs to provide the switching service and its lost contribution from the line-haul. An access pricing rule that satisfies this fundamental principle is necessary to ensure adequate incentives to invest and to avoid a rule that creates perverse and counterproductive incentives for inefficient switching.

¹ SURFACE TRANSP. BD., DECISION, PETITION FOR RULEMAKING TO ADOPT REVISED COMPETITIVE SWITCHING RULES 17-19, Docket No. EP 711 (Sub-No. 1), (July 27, 2016) [hereinafter STB DECISION].

² *Id.* at 25.

III. Public Interest Would Not be Advanced by Proposed Forced Access Rules

a. Background

8. Forced access is widely disfavored as a matter of policy and the economics of regulation because it poses inherent risks to the public interest. Forced access unequivocally reduces incentives to invest, with the predictable consequence of diminishing quality of service and dampening innovation. Weighed against these social costs, forced access can only generate potentially offsetting benefits if it induces more efficient use of the shared resource. Forced access in the railroad industry, however, is highly likely to create significant inefficiencies. Indeed, the Board has long and correctly recognized the efficiencies of single-line rail service and reserved application of access relief only to situations in which it is necessary to remedy or prevent competitive abuse or inadequate service.³ The Board's approach to forced access to date has therefore been consistent with the best practices and principles of regulatory oversight applied by other regulatory agencies responsible for national or industrial competition policy.

9. The overarching national competition policy against forced access of competitive assets and the general principles of the economics of regulation suggest that neither departing from the Board's long-established recognition of the efficiencies of single-line service nor promoting greater use of forced access would be in the public interest.

b. Forced Access Is Disfavored as a Matter of Economic Policy

10. Forced access is a disfavored form of regulation for good reason. It does not, by itself, expand output or result in reduced prices, and in fact may have the opposite effect.⁴

³ See *Midtec Paper Corp. v Chicago & North Western Transp. Co.*, 3 I.C.C. 2d 171, 181 (1986), *aff'd sub nom.*, 857 F.2d 1487 (D.C. Cir. 1988). See also 49 C.F.R. § 1144.2(a)(1).

⁴ Keith N. Hylton, *Economic Rents and Essential Facilities*, 1991 B.Y.U. L. REV. 1243, 1253 (“[W]ith shared access to the facility, it may become clear to the competing firms that since neither possesses a cost advantage there is little to be gained by trying to underprice the other.”).

Furthermore, it often results in deterioration in quality or availability of service, and reduces incentives to invest.⁵

11. Forced access in the railway industry is even more problematic. The heavy physical and economic burden of building and operating switching yards, the challenge of imposing more switching events on a nationwide network, and the well-known efficiency advantages of single-line service mean forced access is highly likely to negatively impact the railroads, shippers, and customers.

12. Forced access is appropriate only where it serves the public interest, rather than bestowing special benefits upon particular private parties. While certain private interests may benefit from the imposition of a forced access regime,⁶ the Board's decision must be guided by the public interest as a whole. The distinction between benefits to particular parties and benefits to the public interest is reflected in several areas of American law where a sharing requirement has been considered.

i. The National Competition Policy Embodied in Antitrust and Intellectual Property Laws Broadly Rejects Forced Access

13. Competition policy has long rejected imposing upon a firm any duty to share or assist a rival. That policy is based upon the economic theory and evidence that imposing such a duty is more likely to help individual competitors than to promote competition. Forced access disrupts, rather than enhances, competitive economic forces in a market. Competition policy recognizes that very often – indeed in most cases – the operational inefficiencies that result from forced access would subsume any intention of expanding output or reducing prices. The very

⁵ Daniel F. Spulber & Christopher S. Yoo, *Access to Networks: Economic and Constitutional Connections*, 88 Cornell L. Rev. 885 (2003).

⁶ STB DECISION, *supra* note 1, at 6.

limited circumstances in which antitrust law has recognized such a duty to deal and thus been willing to impose a forced access regime are entirely inapposite in this context.

14. In *Verizon Communications v. Trinko*, the Supreme Court made clear that there are only limited situations in which a firm, even a bona fide monopolist, should be compelled to deal with rivals, noting the “uncertain virtue of forced sharing” in the marketplace.⁷ The Court expressed concern that forcing a firm to share an important asset would discourage beneficial investment both by that firm and by rivals.⁸ The Court’s reasoning focused upon the need to preserve incentives that attract investment and innovation even in cases where doing so could lead to concentrated markets.⁹

15. The policy concerns with forced sharing articulated in the Supreme Court’s judgment in *Trinko* are by no means limited to the antitrust context. Rather, these concerns reflect a broader consensus view that industry regulation should be attuned to the dynamic elements of competition – incentives associated with innovation and investment – rather than focused myopically upon static indicators, such as price levels, the number of competitors, or the relative sizes of market participants.¹⁰ This policy is consistent with, and informed by, the overwhelming economic evidence that dynamic market forces drive economic growth, and any

⁷ *Verizon Commc’ns Inc. v. Law Office of Curtis V. Trinko, LLP*, 540 U.S. 398, 408 (2004).

⁸ *Id.* at 407-08 (“Compelling . . . firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities.”).

⁹ *Id.* at 407 (“The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system. The opportunity to charge monopoly prices—at least for a short period—is what attracts ‘business acumen’ in the first place; it induces risk taking that produces innovation and economic growth. To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive *conduct*.”) (emphasis in original).

¹⁰ See David Evans & Keith N. Hylton, *The Lawful Acquisition and Exercise of Monopoly Power and Its Implications for the Objectives of Antitrust*, 4 COMPETITION POL’Y INT’L 203, Autumn 2008; see also 11 PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 771 (3d ed. 2011) (“Forcing a firm . . . to share a monopoly discourages firms from developing their own alternative inputs” and “a court injunction requiring the defendant to share actually perpetuates the monopoly by reducing the incentive for development of realistically available competitive alternatives.”).

threat or impediment to investment or innovation will ultimately have negative economic repercussions.¹¹

16. Lower courts have taken to heart the Supreme Court’s instruction to apply competition law in a manner that avoids discouraging investment and innovation, the hallmarks of dynamic competition.¹² Even before *Trinko*, courts long recognized that there is ample space for firms to develop, invest, innovate, and enjoy the attendant competitive advantages without running afoul of the antitrust laws.¹³ And even where investment and innovation lead to a monopoly or monopolist control over an ostensibly “essential” resource or asset, courts have rejected demands by competitors for access to such facilities.¹⁴ The Board’s proposal presents a very real threat to both investment and innovation, and the letter of the antitrust law as well as the economic principles it is based upon counsel against it.

¹¹ ROBERT COOTER & AARON EDLIN, *THE FALCON’S GYRE: LEGAL FOUNDATIONS OF ECONOMIC INNOVATION AND GROWTH* § 1.6 (Version 1.4, 2014) (“In the last 100 years, innovation caused more economic growth than anything else, including using more resources.”).

¹² *See, e.g.* *Novell, Inc. v. Microsoft Corp.*, 731 F.3d 1064 (10th Cir. 2013) (affirming finding that Microsoft’s refusal to share application programming interfaces for Windows 95 with competitor Novell was not an antitrust violation); *Solid FX, LLC v. Jeppesen Sanderson, Inc.*, 935 F. Supp. 2d 1069 (D. Colo. 2013) (declining to find an antitrust violation where defendant refused to share copyright-protected airport terminal charts and integration toolkits needed for plaintiff’s development of certain software); *Bookhouse of Stuyvesant Plaza v. Amazon.com*, 985 F. Supp. 2d 612 (S.D.N.Y. 2013) (dismissing an action against Amazon whereby plaintiffs, who sought to sell e-books for use on Amazon’s Kindle e-reader, complained that Amazon unilaterally refused to share the Kindle platform or app). Even in cases where a firm’s asset is not protected by a copyright or patent, as when a firm aggregates publicly-sourced information into a valuable asset, that firm cannot be forced to share because to do so could “reduce incentive to innovate and ultimately harm consumers.” *Morris Commc'ns Corp. v. PGA Tour, Inc.*, 235 F. Supp. 2d 1269, 1285 (M.D. Fla. 2002).

¹³ *See e.g.* *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 281, 301 (2d Cir. 1979) (“Because . . . a monopolist is permitted, and indeed encouraged, by § 2 to compete aggressively on the merits, any success that it may achieve through ‘the process of invention and innovation’ is clearly tolerated by the antitrust laws. . . . [W]e respect innovation, and we have construed § 2 of the Act to avoid an interpretation that would stifle it.”).

¹⁴ At least in the absence of some separate showing of anticompetitive conduct or intent. *See Trinko*, 540 U.S. at 408.

17. *Trinko* and modern competition policy make clear that forced access should be considered an extreme remedy, rarely imposed, and generally disfavored.¹⁵ Forced access has been imposed for competition policy reasons in only rare circumstances, for example, where a party voluntarily changes a prior course of dealing to his own detriment and in the absence of any rational business justification,¹⁶ or colludes with others to restrict access to an important resource.¹⁷

18. Like the antitrust laws, the constitutionally-grounded intellectual property (“IP”) framework set forth by the Copyright and Patent Acts recognizes that rightsholders have broad control over the use of their IP and generally disfavors the forced sharing of IP rights.¹⁸ American IP law, like antitrust law, disfavors the forced sharing of IP not only because it subverts the goals of the IP system, but also because it deters the very incentives that spark creation in the first place. The reluctance to force sharing is consistent across a number of facets of the IP laws:

- Patent Misuse: The Patent Act specifically notes that a patentholder cannot be deemed guilty of patent misuse by refusing to license his patented technology to

¹⁵ 11 AREEDA & HOVENKAMP, *supra* note 10, ¶¶ 771, 773 (describing how forcing a firm to share “is inconsistent with antitrust basic goals” and constitutes “an exceptionally drastic antitrust remedy, having the consequences of preserving the monopoly and often of turning the defendant’s facility into what amounts to a public utility”).

¹⁶ *See Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985) (holding that the defendant’s abrupt termination of a long-standing, and otherwise beneficial joint-marketing arrangement indicated an unlawful purpose to monopolize).

¹⁷ *See United States v. Terminal R.R. Ass’n*, 224 U.S. 383 (1912). Defendants acquired all of the terminal facilities for the railroads that crossed the Mississippi River en route to St. Louis and used their exclusive assets to disadvantage all other railway companies. *Id.* at 406-07. Additionally, this case, and the forced sharing remedy that resulted, pre-dated the Clayton Act, passed in 1914, which set forth a framework for modern merger control, so to avoid acquisitions of the type that was at issue in *Terminal Railroad*. In executing its authority over railroad mergers, the Board has consistently imposed protective conditions to protect existing competition and exercised oversight to ensure that competition is not reduced as a result of a merger.

¹⁸ The U.S. Constitution endows Congress with the ability and responsibility to “promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries,” and the laws promulgated by Congress have thus set out “exclusive” rights that inure to creators. U.S. CONST. art. I, § 8, cl. 8.

another party.¹⁹ In addition, the Supreme Court has strongly criticized forced sharing of patents generally, and in the patent misuse context specifically.²⁰

- Blocking Patents: In situations where an inventor patents a technology and a subsequent inventor improves it, what results is a situation of “blocking patents.” The inventor of the improvement has no ability to practice his invention without permission of the original inventor, and the original inventor cannot practice the improvement on his own invention.²¹ This sort of situation would be ripe for a legal requirement forcing the two to share their IP, but the Patent Act offers no such provision.²²
- Compulsory Licensing of Copyrights: The Copyright Act recognizes very limited situations where a copyright holder must issue a compulsory license. One example is the § 115 compulsory license for making and distributing recordings of musical works.²³ Despite § 115, the vast majority of licensees instead seek permission directly from the copyright holder and scholars have argued that the § 115 compulsory license is inefficient, ineffective, and should be repealed.²⁴

¹⁹ 35 U.S.C. § 271(d).

²⁰ Dawson Chem. Co. v. Rohm & Haas Co., 448 U.S. 176 (1980) (noting that “[c]ompulsory licensing is a rarity in our patent system” and that though compulsory licensing of patents has “often been proposed” it has routinely been rejected, including during the wholesale revision to the Patent Act in 1952).

²¹ See 5 DONALD S. CHISUM, CHISUM ON PATENTS § 16.02[1][a] (2016); Robert Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75 (1994).

²² As a result, cross-licensing agreements are typically reached between the two inventors directly. Scholars view this as the most efficient outcome, because it encourages bargaining and avoids holdout problems that otherwise might thwart innovation and investment. *Id.* Current voluntary railroad arrangements for reciprocal switching accomplish the same end.

²³ See, e.g., 17 U.S.C. § 115 (setting forth the requirements for compulsory licensing of musical works for the purpose of making and distributing phonorecords).

²⁴ See Howard B. Abrams, *Copyright’s First Compulsory License*, 26 SANTA CLARA HIGH TECH. L.J. 215 (2010) (recommending that the § 115 compulsory license be repealed in its entirety and noting that in 2008 the Harry Fox Agency, a private agent representing authors of musical works, issued 2.44 million licenses of the type offered by § 115 while the U.S. Copyright Office received only 274 requests to invoke the § 115 compulsory license that same year).

The IP laws reflect Congress’s clear policy against forced sharing, drawn from the Constitution’s mandate to enact laws to promote and protect creation and innovation. The shared goal of maintaining incentives to invest and to innovate – the dynamic competition that is critical to economic growth – results in a common national competition policy against forced sharing.

19. Beyond the antitrust and IP laws themselves, the national competition agencies also disfavor forced sharing of IP. The FTC has affirmed that an IP owner can refuse to license his IP without violating Section 2 of the Sherman Act, absent wrongdoing or improper exercise of market power.²⁵ The FTC is concerned that “imposition of a duty to license[] might serve to chill” innovation and investment and therefore the advancement of knowledge and technology, the very sorts of activities that reap benefits to businesses, and ultimately consumers.²⁶ The Department of Justice (“DOJ”) has similarly been reluctant to rely on forced sharing of IP as a remedy to antitrust violations.²⁷ Senior DOJ officials have outlined the “important policy reasons to . . . be cautious” about forced sharing of IP, and noted further that an “improperly-

²⁵ *In re E.I. DuPont de Nemours & Co.*, 96 F.T.C. 653 (1980).

²⁶ *Id.* at 748; *see also* FED. TRADE COMM’N & U.S. DEP’T OF JUSTICE, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION (April 2007), <https://www.ftc.gov/sites/default/files/documents/reports/antitrust-enforcement-and-intellectual-property-rights-promoting-innovation-and-competition-report.s.department-justice-and-federal-trade-commission/p040101promotinginnovationandcompetitionrpt0704.pdf> (“Antitrust liability for refusals to license competitors would compel firms to reach out and affirmatively assist their rivals, a result that is ‘in some tension with the underlying purpose of antitrust law.’ Moreover, liability would restrict the patent holder’s ability to exercise a core part of the patent—the right to exclude.”); FED. TRADE COMM’N & U.S. DEP’T OF JUSTICE, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY (April 6, 1995) <https://www.justice.gov/sites/default/files/atr/legacy/2006/04/27/0558.pdf> (“The intellectual property laws provide incentives for innovation and its dissemination and commercialization by establishing enforceable property rights for the creators of new and useful products, more efficient processes, and original works of expression. In the absence of intellectual property rights, imitators could more rapidly exploit the efforts of innovators and investors without compensation. Rapid imitation would reduce the commercial value of innovation and erode incentives to invest, ultimately to the detriment of consumers.”).

²⁷ Makan Delrahim, Deputy Assistant Att’y Gen., U.S. Dep’t of Justice, Forcing Firms to Share the Sandbox: Compulsory Licensing of Intellectual Property Rights and Antitrust, Remarks at the British Institute of International and Comparative Law (May 10, 2004), <https://www.justice.gov/atr/speech/forcing-firms-share-sandbox-compulsory-licensing-intellectual-property-rights-and>.

designed compulsory license can stifle innovation.”²⁸ While the DOJ has required sharing of IP as a condition to approving an otherwise competitively problematic transaction, it expressed concern about doing so in non-merger situations. Former Assistant Attorney General Bill Baer noted that DOJ was reluctant to get involved in licensing or royalty disputes even in situations where the IP at issue involved a standardized technology, explaining: “If there is no bad conduct by the patent holder, no improper use of enhanced market power, but rather an assertion of lawful patent rights, competition enforcers need to stand down. Otherwise we are penalizing lawful innovation.”²⁹ The agencies have encouraged their international peers to be similarly wary of forced sharing of IP and other assets for these very same reasons.³⁰

20. Clearly, as reflected by the courts, including the Supreme Court, the antitrust agencies, and Congress, forced access is drastic and dangerous, and is only appropriate as a remedy of last resort.

ii. *Forced Access Will Disrupt Service, Impose Significant Inefficiencies, and Reduce Quality of Service in the Railroad Industry*

21. Forced access will engender enormous inefficiencies in the rail network. Greater inefficiencies and associated higher costs lead to higher pricing for customers, not lower, especially in concentrated industries, like railroads, that are highly capital-intensive. Forced access, “by reducing enterprise profitability and ability to invest, would leave railroads

²⁸ *Id.*

²⁹ Bill Baer, Assistant Att’y Gen., U.S. Dep’t of Justice, Remarks at the 19th Annual International Bar Association Competition Conference (Sept. 11, 2015), <https://www.justice.gov/opa/speech/assistant-attorney-general-bill-baer-delivers-remarks-19th-annual-international-bar>. Former Deputy Assistant Attorney General Delrahim has likened the forced sharing of IP to “kill[ing] the goose that lays the golden egg” and threatening the very “system that rewards innovation.” Delrahim, *supra* note 27, at 11.

³⁰ *See, e.g.* Note by the United States, OECD Roundtable on Refusals to Deal (Oct. 12, 2007), <https://www.ftc.gov/sites/default/files/attachments/us-submissions-oecd-and-other-international-competition-fora/usrefdeal.pdf> (“Rules mandating forced sharing on otherwise undesirable terms lower the anticipated return from valuable assets, thereby decreasing the incentive of firms to make investments designed to create new valuable assets. . . Accordingly, many question whether antitrust rules that require forced sharing will slow the pace of innovation and thus inflict long-run harms eclipsing their short-term benefits.”).

vulnerable to the downward spiral of deferred maintenance, inadequate service, derailments, and bankruptcy, as experienced in the 1960s and 1970s” prior to the Staggers Act and deregulation.³¹

22. Forced access also causes higher costs and the risk of inefficiencies is likely to deter market participants from further investing in efforts to improve service or quality for customers.

23. As the Staggers Act envisioned, the railroads today are operating more efficiently and competitively than ever before. Competition is vigorous, with railroads competing against each other and against other modes of transportation. Since the Staggers Act’s passage, freight rail prices have decreased 43%, volume has nearly doubled, and productivity has jumped by 139% – a marked increase in industry efficiency.³² By historical standards, the degree of competition, investment, and innovation in the American railroad industry today is extraordinary. As such, negative effects of forced sharing will be particularly acute in the railroad industry. Thomas Haley, Vice President of Network Planning and Operations for Union Pacific, describes these negative effects in a verified statement that is being submitted in this proceeding.³³ As he explains, switching is an especially time-consuming endeavor, and forced access switching will consume terminal capacity and increase workload in terminals that are already capacity constrained.³⁴

24. Additional switches cause additional delays: each car to be switched must cross the terminal area twice, once when it is loaded and once when it is empty, typically adding 48 to

³¹ ROBERT E. GALLAMORE & JOHN ROBERT MEYER, AMERICAN RAILROADS: DECLINE AND RENAISSANCE IN THE TWENTIETH CENTURY (Harvard Univ. Press 2014).

³² See Ass’n of Am. R.R., Policy Issues, Economic Regulation, <https://www.aar.org/policy/economic-regulation>; T. Randolph Beard, Jeffrey Macher & Chris Vickers, *This Time is Different (?): Telecommunications Unbundling and Lessons for Railroad Regulation*, 49 REV. INDUS. ORG. 289 (2015).

³³ Verified statement of Thomas C. Haley, Vice President of Network Planning and Operations, Union Pacific Railroad Company [hereinafter Haley Statement].

³⁴ *Id.*

96 extra hours of delay.³⁵ This timeline assumes that both railways are operating under fluid conditions, with no setback, and that the receiving railroad has the capacity to readily accept switching cars, which is not always the case.³⁶ As switches, and therefore delays, increase, so too do the number of cars on trains and in yards. This consumes capacity railroads use to serve other customers efficiently, increases the risk that connections will be missed, and naturally slows the network, decreases service and efficiency, and dissatisfies customers.³⁷ Forced access would also negatively impact railroads' ability to monitor and control the flow of inbound traffic, resulting in further congestion and delays for customers.³⁸

25. When combined with coordination difficulties that already exist, but which railroads work diligently to overcome, forced access will result in railroads delivering slower, less efficient service to every shipper. Unlike voluntary reciprocal switching arrangements, which reflect a considered decision by participating railroads that switching can be provided on a mutually beneficial basis without significantly impairing service, forced access will ultimately deprive some shippers of the benefits of efficient railway transport, with no countervailing benefit to competition – or the public interest – on the whole.

iii. Forced Access in the Railroad Industry Will Reduce Incentives to Invest, Dampen Innovation, and Harm Customers

26. Aside from operational inefficiencies, forced access also curtails investment incentives. Decades of economic literature have found that forced access reduces incentives to invest and damages innovation and long-term efficiency.³⁹ Regulatory solutions aimed at

³⁵ *Id.* at 4-5.

³⁶ *Id.* at 4-5.

³⁷ *Id.* at 5-6.

³⁸ *Id.* at 6.

³⁹ See generally Spulber & Yoo, *supra* note 5; Christopher S. Yoo, Vertical Integration and Media Regulation in the New Economy, 19 YALE J. REG. 171 (2002).

remedying perceived market failures, such as forced access regimes, often fall short of efficient outcomes.⁴⁰ As Keith Hylton has written, “[a] compulsory sharing rule may reduce incentives to develop cost-reducing facilities, or it may lead to inefficient sharing which reduces the cost advantage provided by the facility.”⁴¹ Neither result benefits consumers or competition. Moreover, Daniel F. Spulber and Christopher S. Yoo have observed how, “not only can a regulatory access regime harm allocative efficiency . . . regulation can also harm dynamic efficiency by causing investment incentives to fall below efficient levels and by creating de facto entry barriers.”⁴² They caution that “regulators confronting a market failure must ask themselves the logically subsidiary question whether government intervention is likely to improve matters or make them worse.”⁴³

27. Yoo describes forced access regimes as “extremely questionable from the standpoint of static efficiency,” since there is no guarantee that compelling access will deliver the benefits in price and quantity necessary to justify such a heavy-handed regulation.⁴⁴ The impact of forced access on dynamic efficiency is even more severe, however, because it actually deters investment, innovation, and entry.

28. It is well settled that resources that are protected by well-defined property rights are the “most likely to receive the appropriate level of conservation and investment.”⁴⁵ Garrett Hardin’s insights into the “Tragedy of the Commons,” that jointly owned resources tend to be

⁴⁰ Spulber & Yoo, *supra* note 5, at 931.

⁴¹ Hylton, *supra* note 4, at 1284.

⁴² Spulber & Yoo, *supra* note 5, at 931.

⁴³ *Id.* See also Thomas E. Kauper, *Section Two of the Sherman Act: The Search for Standards*, 93 GEO. L.J. 1623, 1626 n.21 (2005) (“Recent cases indicate that sharing even an essential facility is not required where there is an efficiency reason for not doing so.”).

⁴⁴ Yoo, *supra* note 39, at 246.

⁴⁵ *Id.*

overused and receive suboptimal levels of investment,⁴⁶ apply equally in the context of forced access regimes. And as Yoo explains, forcing market participants to share resources “reduces incentives to improve their facilities and pursue technological innovation,” because “any benefits gained from investments in capital or research must be shared with competitors.”⁴⁷

29. In addition, firms that seek and receive access to an input via a forced sharing regime have weak incentive to self-supply or to enter into efficient partnerships with alternative suppliers.⁴⁸ Forced access reduces, or arguably destroys altogether, any incentive for the development of efficient new solutions. As a result, access should not be forced where the resource is available from another source, even if it is only available at significant cost and in the relatively long run.⁴⁹ In this way, forced access regimes focus myopically on the state of the industry as it stands currently, and “ignore market evolution and the potential for sudden technological change by adopting a static mindset preoccupied with micromanaging an existing platform regardless of the implications for the development of future networks.”⁵⁰

30. Railroad networks by their very nature are entirely dependent on ongoing investment, the fruits of which have been apparent since the passage of the Staggers Act: freight rail productivity has soared by 139%, prices have decreased 43%, and improved profitability has led railroads to invest more than \$600 billion in private funds back into their networks.⁵¹

⁴⁶ Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968).

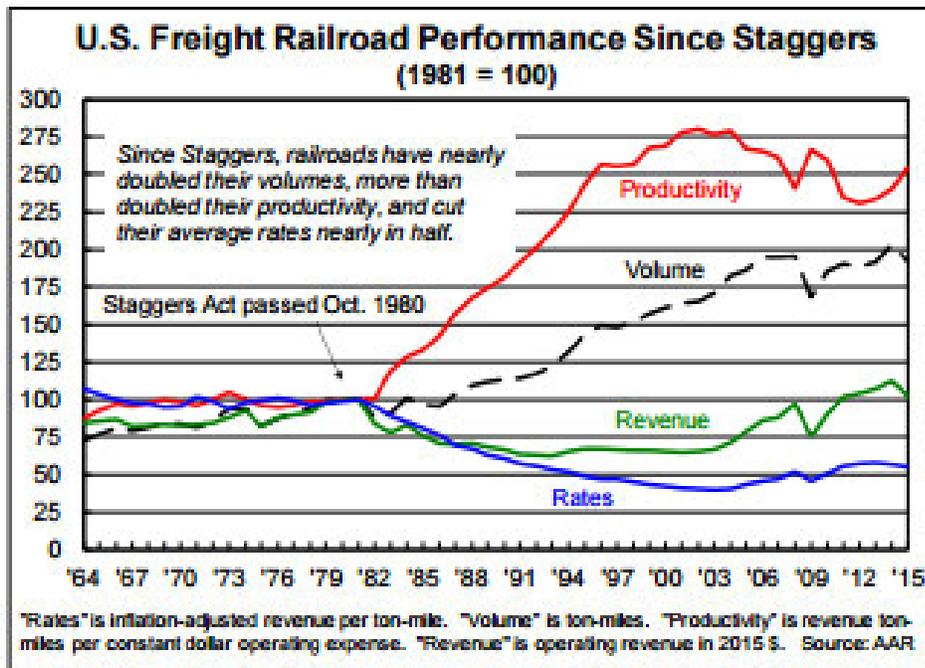
⁴⁷ See generally Yoo, *supra* note 39.

⁴⁸ *Id.* at 246 n.292 (citing 3A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW, ¶ 771b, at 174-76, ¶ 773a, at 201 (1996) and Keith N. Hylton, Economic Rents and Essential Facilities, 1991 BYU L. REV. 1243, 1261 (1991)).

⁴⁹ *Id.* at 246 n.294 (citing 3A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW, ¶ 773b2, at 203-05, ¶ 774c, at 220, ¶ 787c1, at 290 (1996)).

⁵⁰ Adam D. Thierer, “Net Neutrality” *Digital Discrimination or Regulatory Gamesmanship in Cyberspace*, Policy Analysis, CATO POL’Y ANALYSIS NO. 507 (Jan. 12, 2004), <http://object.cato.org/sites/cato.org/files/pubs/pdf/pa507.pdf>.

⁵¹ See generally Ass’n of Am. R.R., *supra* note 32; Beard et al., *supra* note 32.



31. Since 1980, freight railroads have reinvested \$480 billion of their own revenues in infrastructure and equipment, representing 40 cents of every dollar of revenue earned.⁵² It is important to remember that this is all private money; railroads, unlike the other modes of freight transportation, must finance their own roadways.⁵³ For railroads to continue to expand and provide quality service to meet the needs of a growing society, they must be able to earn sufficient profits to fund major capital investments.⁵⁴ Railroads already spend five times more revenue on capital than the average U.S. manufacturer.⁵⁵ This investment in infrastructure ensures that rail networks can successfully compete against other transportation modes and continue to grow. In today's transportation environment, characterized by increased intermodal competition, maintaining and supporting investment in the railways is more crucial than ever.

⁵² Lindsey Hovland, *Derailed: How Government Interference Threatens to Destroy the Rail Industry—and How To Get Back on Track*, 40 *TRANSP. L.J.* 49, 60 (2013).

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ *Id.*

32. Increased use of forced switching will halt or reverse decades of progress towards a more efficient railway system under the Staggers Act by increasing workload in already constrained terminal areas, degrading service across the network, and limiting a carrier's ability to plan and manage the network. The Board's proposal increases the need for market participants to make capital investment while simultaneously reducing these players' ability to invest. It jeopardizes opportunities to invest in innovation, and damages a railroad's potential to recoup any investment that does occur, leading to a stagnant industry unable to meet present and future customer needs. A forced access requirement effectively guts the rail industry of one of most important vectors of competition.

33. The proposed regime will, as discussed in Section IV, reduce earnings and returns on investment. Basic economics teaches that a lower rate of return on investment leads inevitably to less investment. The history of deregulation in the rail industry has shown that continued investment is crucial to the health of the industry and the economy overall; any measures that reduce or deter investment should be scrutinized closely.

34. For example, terminals are already the "Achilles' heel" of rail networks – they enable the crucial movement of traffic, but at great expense and investment.⁵⁶ Forced access will put terminals under added pressure, requiring increased investment, but railroads will be discouraged from making these crucial investments.⁵⁷ Railroads will receive less revenue from neighboring lines as a result of the proposal and will have greater uncertainty surrounding required resources at switching yards. This unfortunate combination means that railroads that have already invested in the necessary infrastructure to operate and facilitate switching, and who,

⁵⁶ *Petition for Rulemaking to Adopt Revised Competitive Switching Rules: Hearing on EP 711 Before the U.S. Surface Transp. Bd.* (Mar. 26, 2014) (Testimony of Thomas Haley, Assistant VP, Network Capital Planning, Union Pacific), at 41:4.

⁵⁷ Haley Statement, *supra* note 33, at 15.

absent forced access, would continue to make such investments, will have a lower expected return on those investments. These railroads' incentives to invest in infrastructure are thereby reduced to the detriment of customers and the competitive marketplace as a whole. As Mr. Haley explains, forced access would "increase demands for capital investment, while reducing [railroads'] ability and incentive to make those investments."⁵⁸

35. Likewise, Jon Panzer, Vice President of Financial Planning and Analysis for Union Pacific Railroad Company, notes that "there are many locations on [Union Pacific's] network where forced switching would not be feasible due to a lack of capacity" at present.⁵⁹ Without railroads investing heavily to add this necessary capacity, "additional switching activity will cause degradation in service and thus further reduce capacity."⁶⁰ Mr. Panzer explains that in determining whether to make a particular capital investment, Union Pacific calculates a project's expected Return on Investment ("ROI").⁶¹ As part of this analysis, it contemplates the "revenue growth from attracting new traffic and cost savings from implementing more efficient operations to handle existing traffic," and "then consider whether the expected ROI is sufficiently high to justify the investment."⁶² Where a project's expected ROI is below the cost of the capital investment, "shareholders would demand that we return cash to them rather than spend it on an unpromising investment."⁶³ Mr. Panzer discusses a number of ways in which forced access will threaten ROI and undermine capital investment, and therefore "decrease[] the number of potential capital projects for which the expected ROI justifies investment."⁶⁴

⁵⁸ *Id.* at 2.

⁵⁹ Verified statement of Jon T. Panzer, Vice President of Financial Planning and Analysis at Union Pacific Railroad Company, at 9 [hereinafter Panzer Statement].

⁶⁰ *Id.* at 9.

⁶¹ *Id.* at 3.

⁶² *Id.* at 3.

⁶³ *Id.* at 4.

⁶⁴ *Id.* at 7-10.

36. Each of the factors the Board would consider in determining whether the potential benefits from a proposed mandatory switching arrangement outweigh the potential costs counsels against imposition of the Board’s proposed rules. Departing from decades of policy established since the introduction of the Staggers Act that has safeguarded and stimulated competition and innovation, the proposal does not “further the rail transportation policy of 49 U.S.C. 10101.”⁶⁵ As described above, the efficiency of specific routes, and of the network as a whole, would be significantly degraded by imposition of forced access.⁶⁶ The “impact of the proposed switching arrangement on capital investment” would be ruinous, and as a result, forced access will not lead to “access to new markets,” and instead may have the opposite effect.⁶⁷ Service quality will suffer,⁶⁸ employees will be expected to operate wholly avoidable switches,⁶⁹ traffic volumes will not grow,⁷⁰ and the rail transportation network as a whole will become congested and inefficient. Under the proposal, rail will be unable to keep pace with other modes of freight transportation, which themselves are not subject to a forced access requirement.⁷¹

iv. Forced Access is an Extreme Remedy that is Rarely Imposed, Typically Counterproductive, and Would Be Particularly Ill-Suited to the Railroad Industry

37. Congress, courts, and agencies have seldom broken from the general policy preference to avoid forced access regulations. When regulators or courts have resorted to forced access, the result has been as economics predicts: reduced efficiency, diminished incentives to invest, and reduced innovation.

⁶⁵ Reciprocal Switching, 81 Fed. Reg. 51149 (proposed July 25, 2016) (to be codified at 49 C.F.R. § 1145.2(a)(1)(iii)(A)).

⁶⁶ *Id.* at § 1145.2(a)(1)(iii)(B).

⁶⁷ *Id.* at § 1145.2(a)(1)(iii)(C) and 1145.2(a)(1)(iii)(D).

⁶⁸ *Id.* at § 1145.2(a)(1)(iii)(E).

⁶⁹ *Id.* at § 1145.2(a)(1)(iii)(F).

⁷⁰ *Id.* at § 1145.2(a)(1)(iii)(G).

⁷¹ *Id.* at § 1145.2(a)(1)(iii)(H).

38. Forced access exists in a handful of regulatory regimes affecting the electricity, natural gas, and telecommunications sectors. Federal regulations imposing forced access requirements for electricity transmission, natural gas transportation, and telecommunications services are set against a vastly different industry background than railroads.⁷² As a result, forced access in the railroad industry would not yield public interest benefits, as it may have done in these other industries. Rather, it would harken back to the pre-Staggers Act regulatory environment that Congress has expressly rejected.

39. Electricity and gas are homogenous commodities, the movement of which is relatively easy to manage and regulate once initiated, whereas railroads involve the physical movement of multiple heterogeneous products and commodities all having vastly different market values, weights, densities, and compositions and requiring the use of different types of railcars, in different locations, across the country.⁷³ Consequently, with rail, a one-size-fits-all approach does not work in the face of such diversity of needs, interests, and resources. The overwhelming weight of economic authority concludes that a significant reduction in both static and dynamic efficiency is likely to follow from the imposition of forced access in the railroad industry.

40. A May 2000 paper by Amy Candell and Joseph Kalt for the Advanced Workshop in Regulation and Competition describes how “the value of getting cars through a particular yard at a particular time is dependent upon a myriad of logistical coordination steps that put locomotives and crews and cars in compatible places and compatible times.”⁷⁴ Candell and Kalt

⁷² See generally SURFACE TRANSP. BD., AN EXAMINATION OF THE STB’S APPROACH TO FREIGHT RAIL RATE REGULATION AND OPTIONS FOR SIMPLIFICATION § 7 (Sept. 14, 2016) [hereinafter 2016 RATE REGULATION REPORT].

⁷³ *Id.* at § 7.3.

⁷⁴ Robert Gallamore & John Panzar, *When is Competition Not Good? The Case of Compelled Access and Maximum Rate Regulation for Railroad “Captive Shippers”*, at 5-6 (Oct. 6, 2004), https://www.researchgate.net/publication/253988711_When_is_Competition_Not_Good_The_Case_of_Compelled

argue that railroad networks are grids rather than hub-and-spoke configurations, and, as such, are highly susceptible to congestion.⁷⁵ In contrast to natural gas or electricity, which are fungible and follow the path of least resistance to consumption, railroad shipments typically match specific origins and destinations. Thus, the rail system is “notably congestible, with capacity constraints and stochastic disruptions that create intra and intercarrier externalities in the form of incompatible scheduling demands and constraints.”⁷⁶

41. Economists Marc Ivaldi and Gerard McCullough, in their econometric studies of American railroad cost data, criticized as “dangerously misleading” the analogy between forced access in the rail industry and forced access in the telecommunications and electric power utilities. As they explain, locomotives are larger than electrons and trains are much harder to switch than the flow of electricity.⁷⁷

42. Furthermore, railway cars subject railways to an ongoing burden; the infrastructure necessary to accommodate switching cannot be put in place as an initial matter and relied upon to function without intervention. As discussed in detail above, the forced access of rail cars impacts tens of thousands of employees in thousands of locations across the country on a daily basis, massively impacting the efficient operation of a railway system. Switching is a capital- and labor-intensive operation, requiring not only substantial upfront investment, but also significant ongoing resources to operate efficiently on a daily basis. This ongoing burden is not present in industries like electricity, natural gas, or telecommunications.

[Access and Maximum Rate Regulation for Railroad Captive Shippers](#) (citing Amy Candell & Joseph Kalt, *Open Access for Railroads? Implications for a Non-Hub, Congestible Network Industry*, May 2000).

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Id.* at 12 (citing Marc Ivaldi & Gerard J. McCullough, *Density and Integration Effects on Class I U.S. Freight Railroads*, 19 J. REG. ECON. 161 (2001)).

43. The difference between the physical requirements of forced access in the railroad industry and forced access in the telecommunications sector is also stark. If an Internet interconnection point becomes congested, adding capacity does not involve a significant, capital-intensive investment; indeed, the Federal Communications Commission (“FCC”) in its Open Internet Order (also referred to as the Net Neutrality regulations) relied on statements from edge and transit providers that additional investment in capacity would be “de minimis.”⁷⁸ This stands in contrast to the massive investment that would be required of railroads to expand switching capacity, investments that they are unlikely to consider if, because of forced access, they are not guaranteed to recoup their outlays.

44. Another difference in the physical characteristics of the railroad industry and telecommunications is the contrast in the agility in rerouting to avoid congestion or a disruption on their respective networks. Rerouting data or messages is nearly instantaneous in telecommunications. However, the average velocity for rail cars ranges from 20 to 30 miles per hour depending on the type of service.⁷⁹

45. Finally, in other industries where forced access has been implemented, the statutory or jurisdictional authority of the relevant regulatory agency differs from that granted to the Board. For instance, the Federal Energy Regulatory Commission’s (“FERC”) regulatory format is already, by nature, “intrusive and wide in scope.”⁸⁰ FERC is affirmatively required to regulate all rates unless the regulated company can prove that the market for its services is competitive and that regulation, therefore, is unnecessary. While railroads are currently

⁷⁸ In the Matter of Protecting and Promoting the Open Internet, Fed. Commc’ns Comm’n, GN Docket No. 14-28, ¶ 200 (Mar. 12, 2015), https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-24A1.pdf [hereinafter OIO].

⁷⁹ See UNION PACIFIC R.R. CO., WEEKLY U.S. RAIL SERVICE ISSUES DATA COLLECTION REPORTS, Docket No. EP 724 (Sub-No. 3).

⁸⁰ 2016 RATE REGULATION REPORT, *supra* note 72, at 98.

presumed *not* to have market dominance where the R/VC ratio of the rate is below 180%, FERC only grants market-based rate authority to utilities that can demonstrate that they do not possess horizontal or vertical market power based on market shares, market concentration, open-access transmission filings and other factors.⁸¹

46. And even in these highly distinguishable industries, forced access is often economically problematic. For example, the FCC’s prior “line sharing” requirement curtailed investment and innovation in broadband services. More recently, the FCC’s regulatory restraint in addressing broadband peering arrangements suggests that it has recognized the damage that can be done from sharing mandates and has instead chosen to proceed carefully when considering any forced access proposal.

47. Until 2003, FCC regulations included a “line sharing” provision requiring telephone carriers offering broadband Digital Subscriber Line (“DSL”) services to share (via a leasing requirement) certain frequencies to provide competing data services at low rates.⁸² DSL competed directly with broadband cable, which grew rapidly in large part because it was not subject to such a sharing provision. Though both technologies were developed around the same time, by the end of 2002, cable broadband had more than twice as many subscribers as DSL.⁸³ With cable broadband expanding and DSL floundering, the FCC deregulated and eliminated the line sharing requirement in 2003, at which point investment in DSL quickly increased, resulting

⁸¹ *Id.* (citing Final Rule, Refinements to Policies and Procedures for Market-Based Rates for Wholesale Sales of Electric Energy, Capacity and Ancillary Services by Public Utilities, Order No. 816, 80 Fed. Reg. 67,056 (Oct. 30, 2015)).

⁸² Thomas W. Hazlett & Joshua D. Wright, The Law and Economics of Network Neutrality, 45 *IND. L. REV.* 767, 835 (2012); Thomas W. Hazlett & Anil Caliskan, Natural Experiments in U.S. Broadband Regulation, 7 *REV. NETWORK ECON.* 460 (2008).

⁸³ The FCC estimates that cable served over 11.3 million customers by the end of 2002 compared to just 5.5 million for DSL. Hazlett & Caliskan, *supra* note 82, at 9.

in a dramatic increase in DSL subscribers.⁸⁴ Rather than expanding options and furthering “open access,” the line sharing requirement held back investment in DSL, thereby hampering its expansion and, in turn, consumer choice. Freeing DSL providers from the forced line sharing requirement thus allowed them to expand their market presence and better compete with other Internet service providers (“ISPs”), all to the benefit of the public interest.

48. More than ten years after eliminating the line sharing requirement, the FCC faced yet another policy choice when drafting its recently adopted Open Internet Order: whether to require the (now, more mature) broadband providers to “peer” with each other, an arrangement akin to the proposal to impose switching on Class I railroad carriers. In adopting the 2015 Open Internet Order the FCC declined to do so, determining that forced peering was “not . . . appropriate or necessary” to bring Internet traffic exchange arrangements within the purview of the proposed rules.⁸⁵ Instead, the FCC found it more appropriate to leave peering and Internet traffic exchange arrangements to commercial negotiations, and stated that it would take a case-by-case approach should major problems arise.

49. Even though the FCC decided to eschew peering requirements from its Open Internet Order, that rulemaking on a broader scale prohibits broadband providers from favoring or prioritizing Internet traffic from their partners or paying affiliates, or from disfavoring, blocking or degrading traffic from unaffiliated third parties – in other words, it requires ISPs to provide an identical level of access.⁸⁶ In the year following the Order, economists have noted that investment among broadband providers has decreased significantly in response. For example, in the first half of 2015, AT&T’s and Charter’s capital expenditures decreased 29%

⁸⁴ Within just a few quarters following elimination of the line sharing requirement, subscriber growth rates of DSL matched that of cable broadband. Hazlett & Wright, *supra* note 82, at 837.

⁸⁵ OIO, *supra* note 78, ¶ 202.

⁸⁶ *Id.* at ¶¶ 14-22.

when compared to the same period from 2014 – before the Order was promulgated by the FCC.⁸⁷ Similarly, Cablevision’s capital expenditures decreased by 10%, CenturyLink’s decreased by 9%, and Verizon’s decreased by 4%.⁸⁸ Indeed, across all wireline ISPs the average capital expenditures decline was 12% in the six months following the Order.⁸⁹

50. Judge Williams identified reduced investment as one of the unequivocal dangers of forced sharing in his dissent to the D.C. Circuit’s opinion approving the Open Internet Order.⁹⁰ In addition, he also criticized the FCC for not fairly considering the substantial investments made in reliance on the previous regulatory regime.⁹¹ In fact, in Judge Williams’ view at least, such an assessment was required under Supreme Court precedent when an agency considers fundamental changes to a regulatory regime.⁹² This concern is only exacerbated for industries with high fixed costs that require significant investment expenditures – not only telecommunications but also railroads.

51. The FCC’s experience with forced access reinforces the conclusion that, because it discourages investment and innovation, forced access is likely economically harmful to an industry and to competition. It is even less appropriate in the context of railroad transportation where doing so threatens to further constrain already limited capacities and to stifle necessary and costly investment in rail infrastructure.

⁸⁷ Hal Singer, *Does The Tumble In Broadband Investment Spell Doom For The FCC’s Open Internet Order?*, FORBES (Aug. 25, 2015), <http://www.forbes.com/sites/halsinger/2015/08/25/does-the-tumble-in-broadband-investment-spell-doom-for-the-fccs-open-internet-order/#e1425d62627a>.

⁸⁸ *Id.*

⁸⁹ Including wireless ISPs Sprint and T-Mobile reduces the average decline to 8%. *Id.* See also *id.* (explaining that the FCC’s Open Internet Order would lead to a reduction in investments).

⁹⁰ U.S. Telecom Ass’n v. FCC, 825 F.3d 674, 744, 756 (D.C. Cir. 2016) (Williams, J., dissenting) (“In short, the Order’s probable direct effect on investment in broadband seems unambiguously negative.”).

⁹¹ *Id.* at 748.

⁹² *Id.* at 746 (“If a regulatory switch will significantly undercut the productivity and value of past investments, made in reasonable reliance on the old regime, rudimentary fairness suggests that the agency should take that into account in evaluating a possible switch.”).

v. *The Board's Forced Access Proposal Does Not Advance the Public Interest and In Fact Threatens to Undermine It*

52. Quite aside from the practicalities of the Board's proposal, forced access itself injects regulatory uncertainty into the market, which is always economically problematic.⁹³ Economists have long recognized the negative effects of uncertain regulatory regimes.⁹⁴ Regulatory regimes that are perceived as uncertain or unstable lead to the perception that investments carry more risk such that "[f]irms will be less willing to invest in specific assets when they perceive that future regulatory changes could reduce the value of those assets."⁹⁵ Former Federal Reserve Chairman Ben Bernanke, in 1983, found that regulatory uncertainty induces firms to act as if the worst potential outcome will in fact occur.⁹⁶ In this context, for example, railroads are likely to make investment decisions on the assumption that case-by-case applications by shippers will frequently result in forced switching orders.

53. The latest literature suggests that a new regulation can have an especially destructive, negative effect when a regulator's actions are not consistent with its past actions.⁹⁷

⁹³ Kira R. Fabrizio, *The Effect of Regulatory Uncertainty on Investment: Evidence from Renewable Energy Generation*, 29 J.L. ECON. & ORG. 765 (2013) ("The primary insight that uncertainty about future policy stability reduces investment in specific assets is generalizable across industries and settings.").

⁹⁴ Robert S. Pindyck, *Irreversible Investment, Capacity Choice, and the Value of the Firm*, 78 AM. ECON. REV. 969, 983 (1988); Kevin A. Hassett & Joseph W. Sullivan, *Policy Uncertainty and the Economy*, AM. ENTER. INST., 8-10 (Aug. 2016), <https://www.aei.org/wp-content/uploads/2016/08/Policy-Uncertainty.pdf>; Ben S. Bernanke, *Irreversibility, Uncertainty, and Cyclical Investment*, 98 Q. J. ECON. 85, 92-93 (1983); Katsumasa Nishide & Ernesto Kazuhiro Nomi, *Regime Uncertainty and Optimal Investment Timing*, 33 J. ECON. DYNAMICS & CONTROL 1796, 1797 (2009).

⁹⁵ Fabrizio, *supra* note 93, at 766.

⁹⁶ Bernanke, *supra* note 94, at 92-93. See also Hassett & Sullivan, *supra* note 94, at 10-11 (summarizing economic literature on the adverse effects of uncertainty on investment); Nishide & Nomi, *supra* note 94, at 1797 ("[T]he optimal investment at the time of regime shift is to make an investment decision as if the worst-case regime were to occur."); Kevin A. Hassett & Robert J. Shapiro, *Regulation and Investment: A Note on Policy Evaluation under Uncertainty, With an Application to FCC Title II Regulation of the Internet*, GEORGETOWN UNIVERSITY POLICY PAPERS 9 (July 14, 2015), <http://cbpp.georgetown.edu/sites/cbpp.georgetown.edu/files/Shapiro-regulation-investment-note-policy-evaluation-FCC-titleII-regulation-internet.pdf>.

⁹⁷ *Id.*

The literature suggests that regulators should expect significant negative consequences when their rulings create uncertainty.⁹⁸

54. Where capital investment involves large sunk costs that are not easily reversible – as is the case with railroad investments – the negative effects may be felt especially hard.⁹⁹ Kira Fabrizio shows that “investment increased *significantly* less in states with a history of regulatory reversal,” after the restructuring of the American electric utility market through the enactment of state-level Renewable Portfolio Standard policies beginning in 1995.¹⁰⁰

55. Fabrizio’s results suggest that demonstrated regulatory instability may cause investors to anticipate further policy changes, and may discourage investment on the basis that incentives are likely to change.¹⁰¹ The Board has rightly charted a clear and established policy over the last three decades that recognizes the benefits of single-line service and encourages investment as a result. Certainty under the Board’s current policies has encouraged innovation and resulted in a highly efficient and well-functioning railway network. However, as Commissioner Begeman notes in her dissent,¹⁰² there is at present a significant amount of uncertainty inherent in the Board’s proposal, so much that she has “no idea how the proposed rule would or even could be utilized” or what the potential impact could be on shippers, rail carriers, and the fluidity of the rail network.¹⁰³ If the Board moves forward with its proposal, the result will be confusion and disruption, and a chilling of future investment and innovation. Regulatory uncertainty in this context could be, by itself, enough to discourage investment and efficiency in the railroad industry.

⁹⁸ *Id.* at 10.

⁹⁹ *Id.* at 8.

¹⁰⁰ Fabrizio, *supra* note 93, at 793.

¹⁰¹ *Id.* at 792.

¹⁰² STB DECISION, *supra* note 1, at 34-36 (Comm’r Begeman dissenting).

¹⁰³ *Id.* at 36.

IV. The Board's Access Pricing Rule Must Cover the Actual Cost of Providing the Switching Service and Lost Contribution from the Line-Haul

a. Background

84. In its notice of proposed rulemaking, the Board outlined several of the comments it received on the proper approach to access pricing, and ultimately proposed two alternatives. It now seeks comments on the two proposed approaches as well as other potential access fee methodologies.

85. The first alternative proposed by the Board (“Alternative 1”) envisions computing the access fee based on a specific set of factors, which “could” include:¹⁰⁴

- a. Geography where the proposed switch would occur;
- b. Distance between the shipper and proposed interchange;
- c. Capacity of the interchange facility;
- d. Cost of service; and
- e. Other case specific factors.

86. The Board also requested comments on whether the model should include lost contribution from the line-haul or opportunity cost.¹⁰⁵

87. The second alternative proposed by the Board (“Alternative 2”) considers the use of a modified version of the SSW Compensation methodology, which is employed primarily to calculate the access fee in trackage rights cases. The guiding principle the Board articulated is that “[a] switching fee set by the Board could seek to compensate the incumbent for the expenses incurred to provide the service, plus a reasonable return on capital employed.”¹⁰⁶

¹⁰⁴ *Id.* at 25.

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

88. In what follows, I discuss the qualities and general properties of an efficient pricing rule and each of the Board's access fee proposals. I conclude that the Board should be guided by the principle that an access pricing model is workable – and can potentially avoid at least some of the inefficiencies described in Section III of this Statement – if it provides incentives to use and invest in resources efficiently. That principle requires that the access price allow the landlord railroad to recover both its actual costs of providing access and any contribution to fixed costs that it loses if it no longer provides the line-haul service.

b. Properties of an Efficient and Effective Access Pricing Rule

89. An access pricing rule should attempt to recreate the market price of access, which is itself a function of a series of complex relationships, or the rule will invariably distort competition and the parties' incentives. It would be impossible to create a formula that captures all of these factors and relationships; however, it is possible to create a more flexible rule that seeks to replicate the price the parties would reach through arm's length bargaining.

i. An Efficient Access Pricing Rule Must Include the Landlord Railroad's Actual Cost of Providing the Switching Service and Lost Contribution

90. An access pricing rule must fully compensate the landlord railroads for the actual cost of providing the switching service and the lost contribution from line-haul that would exist under competition. For example, an access pricing model analyzed by the Board-commissioned 2016 Rate Regulation Report that covers the cost of providing the service and lost contribution from the line-haul that would exist under competition, and thereby assists the landlord railroad's (*i.e.* the carrier that would perform the switch) progress towards revenue adequacy, while

facilitating competitive access by shippers and tenant railroads (*i.e.* the railroads seeking switching services) is the Efficient Components Pricing Rule (“ECPR”).¹⁰⁷

91. The ECPR access price, when applied to trackage rights, covers:
 - a. “All the variable costs incurred by RR # 1 [the landlord railroad] to provide trackage rights service to RR # 2 [the tenant railroad];
 - b. “Contribute enough to RR # 1 for replacement of the incremental capital used in the process, where these costs are valued at replacement cost, not historical cost;
 - c. “Contribute a fair return on RR # 1’s capital costs; and
 - d. “Compensate RR # 1 for any net earnings which it must forego as a result of the tenant’s use of trackage rights.”¹⁰⁸

92. Accordingly, the landlord railroad’s cost of providing the service is accounted for by element (a), while the lost contribution from the line-haul that would exist under competition is covered by elements (b), (c), and (d). In addition, the Report noted that with appropriate modifications to the costs of providing the service component, the ECPR model could be applied to calculate the access fee for reciprocal switching, thus indicating that the lost contribution component is unchanged in this situation.¹⁰⁹ A pricing rule that does not fully incorporate the landlord railroad’s actual cost of providing the switching service and lost contribution, and thus sets the price of access below that of an arm’s length negotiation, will result in inefficient switching, inefficient investment, and reduced quality of service. In addition, such a rule will invariably pick winners and losers.

¹⁰⁷ 2016 RATE REGULATION REPORT, *supra* note 72, at 108-10.

¹⁰⁸ *Id.* at 109.

¹⁰⁹ *Id.* at 109 n.344.

93. During forced switching, a tenant railroad is consuming the landlord railroad's resources—resources that the landlord railroad cannot simultaneously utilize. Certain lines and terminals have higher demand, and thus are of greater value to the landlord railroad. If the landlord railroad is not compensated for these differences in value, the access pricing rule will distort incentives, lead to an inefficiently high number of switching events, cause inefficiently low investment, and reduce innovation. These effects will predictably harm railroads, shippers, and consumers alike.

ii. *An Efficient Access Pricing Rule Should Protect Against Cross-Subsidization*

94. If the landlord railroad's actual cost of providing the switching service and lost contribution are not included in the access price for reciprocal switching and the access price thus fails to replicate an arm's length negotiation between the railroads, forced access would have the practical effect of forcing one railroad and its customers to subsidize another, less efficient railroad, as well as potentially forcing one set of shippers to subsidize another set of shippers.

95. The numerical example described in Union Pacific's reply comments readily illustrates the problem.¹¹⁰ Suppose that landlord railroad L's variable cost of providing single-line service to a single shipper, A, is \$10 per ton, and L charges A \$15 per ton for this service. Suppose further that L is compelled to provide switching to tenant railroad T to serve A. L's line-haul contribution in this situation is \$5 per ton. Finally, suppose that L's incremental costs in providing such switching services are \$2 per ton.

¹¹⁰ Union Pacific R.R. Co., Reply Comments and Evidence on Petition for Rulemaking to Adopt Revised Competitive Switching Rules, at 23 (May 30, 2013), [https://www.stb.gov/Filings/all.nsf/d6ef3e0bc7fe3c6085256fe1004f61cb/e4b8fc58d5a1a9cf85257b7b007688e0/\\$FILE/234339.pdf](https://www.stb.gov/Filings/all.nsf/d6ef3e0bc7fe3c6085256fe1004f61cb/e4b8fc58d5a1a9cf85257b7b007688e0/$FILE/234339.pdf).

96. If the access pricing rule does not compensate L for the lost line-haul contribution, but only the \$2 incremental costs of providing switching services, T is able to capture A's business if:

$$\$2 + T_{VC} \leq \$15$$

With T_{VC} being T's variable costs of providing single-line service to A. To put another way, T is able to capture A's business if:

$$T_{VC} \leq \$15 - \$2$$

$$\Leftrightarrow T_{VC} \leq \$13$$

Thus, if the access pricing rule accounts only for the costs of providing the switching services (*i.e.* \$2 per ton), inefficient switching is facilitated in that a less efficient railroad, T, is able to capture A's business from L because L is being forced to subsidize T's higher variable costs of providing the shipping service to A. The degree of subsidization can be measured as the difference between L's and T's variable costs of providing service to A, which is up to \$3 per ton in this example.

97. Conversely, if L's lost line-haul contribution of \$5 is fully accounted for in the access pricing rule, then T is able to capture A's business only if:

$$T_{VC} + \$2 + \$5 \leq \$15$$

$$\Leftrightarrow T_{VC} \leq \$15 - \$2 - \$5$$

$$\Leftrightarrow T_{VC} \leq \$8$$

In this scenario, efficient switching is achieved in that T can capture A's business only if T's variable costs (*i.e.* T_{VC} + the cost of L's switching service) are lower than or equal to L's variable costs of doing the same thing, *even if switching is required*. In other words, T can capture A's business only if it can provide the service, with switching, to A as efficiently or more efficiently than L does, in which case a competitive market would produce a voluntary switching agreement through arm's length negotiations.

98. The simple illustration shows that an access pricing rule that does not fully compensate the landlord railroad for its lost contribution leads to the subsidization of the tenant railroad by the landlord. This situation can lead to reduced investments and inefficiently frequent levels of switching to the detriment of the industry, shippers, and consumers, as explained above.

99. These concerns are not merely theoretical. Market participants from the industry, such as Mr. Haley, have unambiguously testified that forced access increases the need for railroads to invest in terminals and at the same time decreases their ability to do so.¹¹¹ If the Board's access pricing rule fails to fully compensate the landlord railroad for its lost contribution from the line-haul, and thereby requires it to subsidize the tenant railroad with resources that could have been directed to investments, this outcome would be inevitable.

c. Inefficient Access Pricing will Distort Incentives and Harm Competition and Railroad Customers

100. If the Board imposes an access pricing rule that under-compensates railroads – most likely by adopting a model that does not seek to compensate the landlord railroad for its

¹¹¹ See *e.g.* Haley Statement, *supra* note 33, at 11 (“A forced switching regime would make it even more difficult than it is today to engage in capacity planning or to fund any capacity projects, not just those projects involving terminals.”)

actual cost of providing the switching service and its lost contribution – it will distort incentives and lead to inefficiently low investment, maintenance, and innovation by landlord railroads and an inefficiently high number of switching events.

i. Inefficiently Low Investment, Maintenance, and Innovation

101. As evidenced by experiences in the telecommunications industry,¹¹² an access pricing model that does not consider lost contribution from line-haul that would exist under competition will under-compensate railroads and reduce their incentive to invest in track maintenance, expansion, and innovation.¹¹³

102. Like the railroad industry, the telecommunications industry is a high fixed cost industry that has long been subject to intense regulatory scrutiny; however, this scrutiny has not always produced the expected results, and, at times, has proven problematic to consumers and competition alike.¹¹⁴

103. As discussed above in Section III.b.iv, one of the most economically problematic decisions in the telecommunications industry was the FCC’s previous “line sharing” requirement, which distorted competition and, ultimately, selected winners and losers.¹¹⁵

104. The FCC’s line sharing requirement, which underpriced access, diminished DSL providers’ incentive to invest in and improve their networks. As service degraded, customers

¹¹² See Singer, *supra* note 87 (finding that the FCC’s Open Internet Order led to a serious reduction in capital expenditure by wireline ISPs).

¹¹³ See generally Hassett & Shapiro, *supra* note 94.

¹¹⁴ The 2016 Rate Regulation Report analyzed the distinctions between the railroad and telecommunications industry, and concluded that such differences render the high degree of rate regulation and the access pricing rule adopted in the telecommunications industry inapplicable to the railroad industry. 2016 RATE REGULATION REPORT, *supra* note 72, at 99-105. However, the telecommunications industry’s experiences with a suboptimal access pricing rule are still instructive as to the consequences such a rule entails in general.

¹¹⁵ Hazlett & Wright, *supra* note 82, at 835; Hazlett & Caliskan, *supra* note 82, at 6-7.

began to choose other alternatives and by the end of 2002 cable broadband had twice as many subscribers as DSL.¹¹⁶

105. In 2003, the FCC removed the line sharing requirement, which led to a dramatic increase in DSL subscribers and service.¹¹⁷ Freeing DSL providers from the forced line sharing requirements allowed them to expand their market presence and to compete with other ISPs – all to the benefit of consumers.¹¹⁸ Rather than expanding options and furthering “open access,” the line sharing requirement held back investment in DSL, thereby hampering its expansion and, in turn, consumer choice.

106. DSL customers may have enjoyed the short term benefit of below market prices but were harmed in the long run as DSL lost the ability to compete with broadband cable. Certain customers, who due to their location did not have access to cable broadband,¹¹⁹ were harmed through the reduction of investment in DSL. Other customers were harmed as DSL providers’ ability to offer a competitive alternative gradually diminished.

107. Similarly, while shippers who obtain forced switching at their location may initially benefit from inefficiently low access pricing, they will be harmed in the long run as reduced investment, maintenance, and innovation degrade track quality nationwide. As with locked-in DSL customers, shippers who lack a sufficient alternative to rail service will suffer the greatest harm.

¹¹⁶ The FCC estimates that cable served over 11.3 million customers by the end of 2002 compared to just 5.5 million for DSL. See Hazlett & Caliskan, *supra* note 82, at 9.

¹¹⁷ Within just a few quarters following elimination of the line sharing requirement, subscriber growth rates of DSL matched that of cable broadband. See Hazlett & Wright, *supra* note 82, at 837.

¹¹⁸ *Id.* See also Hazlett & Caliskan, *supra* note 82.

¹¹⁹ See, e.g., Kate Cox, *Why Your Cable Company Doesn’t Always Know If Your New Address Gets Service*, CONSUMERIST (May 26, 2015, 8:00 AM), <https://consumerist.com/2015/05/26/why-your-cable-company-doesnt-always-know-if-your-new-address-gets-service/>.

ii. Inefficiently High Number of Switching Events

108. An access pricing rule that fails to adequately compensate the landlord railroad will distort the parties' bargaining incentives and lead to an inefficiently high number of switching events in two ways.

109. *First*, it will allow tenant railroads to obtain a below-market price that does not fully compensate the landlord railroad by petitioning the Board.

110. *Second*, it will distort the parties' bargaining incentives and lead landlord railroads to agree to below-market prices even without the shipper or the tenant petitioning to the Board. Even when the Board orders switching, the law provides for negotiations between the two railroads over the access price, with Board intervention only if they are unable to reach an agreement.¹²⁰ However, if the Board adopts an access pricing rule that allows tenant railroads and their customers to force switching at below-market prices, landlord railroads will start to accept below-market prices for switching even without Board intervention to avoid the transaction costs of litigating only to end up with the same result. Both effects will lead to an inefficiently high number of switching events.

111. While switching can be efficient under certain circumstances (*i.e.* when the parties would have negotiated a switch through arm's length bargaining) it is not without costs, and an inefficiently high number of switching events will drive those costs to inefficient levels. That is to say, switching takes resources from one activity and allocates them to another. Indeed, an inefficiently high number of switching events will harm competition and lead to deadweight

¹²⁰ 49 U.S.C. § 11102(c)(1).

loss – that is, a loss to society caused by market inefficiency, such as inefficient allocation or use of resources.¹²¹

d. The Board’s Proposals

112. Regardless of the compensation method that the Board ultimately chooses, the access pricing rule must fully account for the landlord railroad’s actual cost of providing the switching service and lost contribution. Otherwise, as discussed above, inefficiently low compensation for forced access will result in cross-subsidization, suboptimal investment, and too much costly switching.

113. The Board specifically sought comments on whether Alternative 1 should include lost contribution. Any access pricing rule, including any formulation of Alternative 1, must compensate the landlord railroad for the full lost contribution from the line-haul that would exist under competition as well as the variable cost of providing the switching service. Failing to do so will lead to inefficiently low investment, maintenance, and innovation, and an inefficiently high number of switching events.

114. Similarly, if the Board adopts a modified version of the SSW Compensation model (Alternative 2), the access pricing rule it adopts must include the landlord railroad’s entire lost contribution from the line-haul that would exist under competition.¹²² As the Board recognizes, the access fee will “compensate the incumbent for the expenses incurred to provide the service, plus a fair and reasonable return on capital employed.”¹²³ This position is consistent with the Board’s longstanding recognition that “[p]erpetuating, without valid reason, a return that

¹²¹ See *supra* Section III.b.

¹²² STB DECISION, *supra* note 1, at 25.

¹²³ *Id.* at 25-26.

is insufficient in the long run to allow for adequate reinvestment is not justified.”¹²⁴ The key economic principle under either Alternative 1 or Alternative 2 is that the access fee must fully compensate the landlord railroad for lost contribution from the entire line-haul, rather than just the assets employed in switching. As Mr. Haley explained, forced switching “would be diverting traffic that [the landlord railroad uses] to build through trains to more distant destinations and blocks of cars that bypass intermediate switch yards.”¹²⁵ As discussed in Section IV.c, forced access would, without an efficient access price, facilitate inefficient switching and reduce investment, maintenance, and innovation. Because the SSW Compensation model focuses only upon compensating the landlord railroad for the lost return relating to its use of the switching assets, but not the landlord railroad’s lost contribution from the entire line-haul, the Board should not adopt SSW Compensation model without modification that ensures full recovery of lost contribution.

V. Conclusion

115. The Board’s proposed forced switching rules would not be in the public interest. As a matter of economic and public policy, forced access is disfavored because it increases costs and reduces incentives to invest. It would have those same harmful impacts in the railroad industry.

116. It is also imperative that the Board include the landlord railroad’s actual cost of providing the switching service and its lost contribution from the line-haul that would exist under competition in its access pricing rule. If the Board fails to adequately compensate the landlord railroads, the rule will invariably create a system of cross-subsidization and lead to inefficiently

¹²⁴ St. Louis Sw. Ry. Co. – Trackage Rights over Missouri Pac. R.R. – Kansas City to St. Louis, 4 I.C.C. 2d 668, 1987 I.C.C. LEXIS 15, at *31 (Dec. 18, 1987) [hereinafter *SSW*].

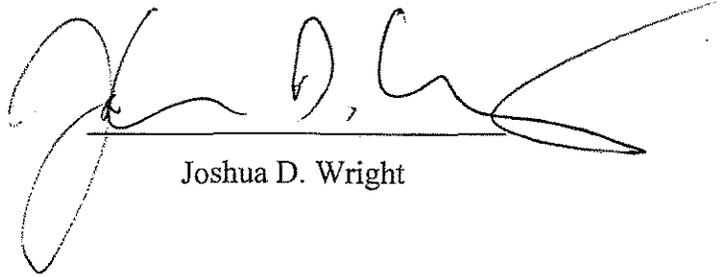
¹²⁵ Haley Statement, *supra* note 33, at 6.

low investment, maintenance, and innovation, and an inefficiently high number of switching events.

VERIFICATION

I, Joshua D. Wright, declare under penalty of perjury that the foregoing Statement is true and correct. I certify that I am qualified and authorized to file this Statement.

Executed on October 26, 2016.



Joshua D. Wright

EXHIBIT A

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CURRENT POSITIONS

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APPOINTMENTS, POSITIONS AND AFFILIATIONS

Commissioner, Federal Trade Commission (January 2013-August 2015)

Associate Professor, George Mason University School of Law (August 2010-May 2011)

Faculty, GMU Law and Economics Center Judicial Education Program (2009 – 2015)

- Economic Institute for Judges (microeconomics and quantitative methods to state and federal judges)
- Case Analysis Seminars (with the Honorable Douglas H. Ginsburg)
- Co-Organizer and Instructor, American Bar Association & Mason Judicial Education Program Institute on Antitrust Law and Economics
- Co-Organizer and Instructor, Empirical and Experimental Methods Workshops for Law Professors (with Jonathan Klick)
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Assistant Professor, George Mason University School of Law (January 2005-August 2010)

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EDUCATION

University of California, Los Angeles, Department of Economics (1999-2003)

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University of California, Los Angeles, School of Law (1998-2002)

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RESEARCH INTERESTS

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Adjunct Professor, Pepperdine University Graduate School of Public Policy (2003)

- Graduate course in Law and Economics

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HONORS, GRANTS AND AWARDS

Recipient, 2016 Global Competition Review Academic Excellence Award for the Global Antitrust Institute

Recipient, 2014 Federalist Society Paul M. Bator Award

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Principal Investigator, Searle Center on Law, Regulation, and Economic Growth Civil Justice Institute Project on State Consumer Protection

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BOOKS AND BOOK CHAPTERS

ANTITRUST LAW IN PERSPECTIVE: CASES, CONCEPTS, AND PROBLEMS IN COMPETITION POLICY (with Andrew I. Gavil, William E. Kovacic, and Jonathan B. Baker) (forthcoming 3rd Edition)

Co-Editor, *PIONEERS IN LAW AND ECONOMICS* (with Lloyd R. Cohen) (2009)

Co-Editor, *RESEARCH HANDBOOK IN THE LAW AND ECONOMICS OF THE FAMILY AND SOCIAL INSTITUTIONS* (with Lloyd R. Cohen) (2011)

Co-Editor, *COMPETITION POLICY AND PATENT LAW UNDER UNCERTAINTY: REGULATING INNOVATION* (with Geoffrey A. Manne) (2011)

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The Goals of Antitrust: Welfare Trumps Choice (with Douglas H. Ginsburg), 81 FORDHAM LAW REVIEW 2405 (2013)

Do Expert Agencies Perform Better Than Generalist Judges? Evidence from the Federal Trade Commission (with Angela M. Diveley), 1 (1) JOURNAL OF ANTITRUST ENFORCEMENT 82 (2013)

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Antitrust Settlements: The Culture of Consent (with Douglas H. Ginsburg), 2-2013 CONCURRENCES 56 (2013)

The Antitrust-Consumer Protection Paradox: Two Policies At War With Each Other, 121 YALE LAW JOURNAL 2216 (2012)

If Search Neutrality is the Answer, What's the Question? (with Geoffrey A. Manne), 2012
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Dynamic Competition and the Limits of Antitrust Institutions (with Douglas H. Ginsburg), 78 (1)
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The Sound of One Hand Clapping: The 2010 Merger Guidelines and the Challenge of Judicial Adoption
(with Judd E. Stone), 39 REVIEW OF INDUSTRIAL ORGANIZATION 154 (2011)

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Manne), 34 HARVARD JOURNAL OF LAW & PUBLIC POLICY 171 (2011)

*Is Antitrust Too Complicated for Generalist Judges? The Impact of Economic Complexity and Judicial
Training on Appeals* (with Michael R. Baye), 54 JOURNAL OF LAW AND ECONOMICS (2011)

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An Evidence-Based Approach to Exclusive Dealing and Loyalty Discounts, GLOBAL COMPETITION POLICY (July 2009)

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The Roberts Court and the Chicago School of Antitrust: The 2006 Term and Beyond, 3(2) COMPETITION POLICY INTERNATIONAL 25 (2007)

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Slotting Contracts and Consumer Welfare, 74(2) ANTITRUST LAW JOURNAL 439 (2007)

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Sui Generis?: An Antitrust Analysis of Buyer Power in the United States and European Union (with Richard Scheelings), 39 AKRON LAW REVIEW 207 (2006)

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Intellectual Property & Antitrust

Actavis and Multiple ANDA Entrants: Beyond the Temporary Duopoly (with Bruce Kobayashi, Douglas Ginsburg & Joanna Tsai), 29 (2) ANTITRUST 89 (2015)

Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts (with Joanna Tsai), 80 (1) ANTITRUST LAW JOURNAL (2015)

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Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup (with Bruce H. Kobayashi), 5 JOURNAL OF COMPETITION LAW AND ECONOMICS 469 (2009), reprinted in *COMPETITION POLICY AND PATENT LAW UNDER UNCERTAINTY: REGULATION INNOVATION* (with Geoffrey A. Manne) (Cambridge University Press, 2011)

Missed Opportunities in Independent Ink, 2005-06 CATO SUPREME COURT REVIEW 333 (2006)

Contracts and Contract Theory

Option Backdating and Why Executive Compensation is Not All About Norms (with Geoffrey A. Manne), 2 CORPORATE GOVERNANCE LAW REVIEW 385 (2006)

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SPEECHES

How to Regulate the Internet of Things Without Harming its Future: Some Do's and Don'ts, U.S. Chamber of Commerce Foundation Event (May 2015),
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Intellectual Property Rights, Truncation, and Actavis: Who's Afraid of the Rule of Reason?, Global

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Regulation in High-Tech Markets: Public Choice, Regulatory Capture, and the FTC, Clemson University Big Ideas About Information Lecture (April 2015),
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Section 5 Revisited: Time for the FTC to Define the Scope of Its Unfair Methods of Competition Authority, Baker Hostetler Symposium on Section 5 of the Federal Trade Commission Act (February 2015),
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Net Neutrality Meets Regulatory Economics 101, The Federalist Society Media and Telecommunications Practice Group Event: “The Future of Media – Is Government Regulation in Today’s Media Landscape ‘Over-The-Top?’” (February 2015),
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Antitrust Analysis of Reverse Payment Settlements After Actavis: Three Questions and Proposed Answers, American Bar Association Section of Antitrust Masters Course VII (October 2014),
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Loyalty Discounts and Pharmaceutical Competition, Global Antitrust Institute Conference on Global Antitrust Challenges for the Pharmaceutical Industry (September 2014),
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Does the FTC Have a New IP Agenda?, New York City Bar Association Antitrust and Trade Regulation Committee 2014 Milton Handler Lecture: "Antitrust in the 21st Century" (March 2014),

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https://www.ftc.gov/sites/default/files/documents/public_statements/recent-antitrust-

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SSOs, FRAND, and Antitrust: Lessons from the Economics of Incomplete Contracts, George Mason Law CPIP Inaugural Academic Conference: “The Commercial Function of Patents in Today’s Innovation Economy” (September 2013),

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The Federal Trade Commission and Monetary Remedies, European University Institute Department of Law Competition Law and Policy Workshop (July 2013),

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Section 5 Recast: Defining the Federal Trade Commission’s Unfair Methods of Competition Authority, New York State Bar Association Antitrust Section Executive Committee Meeting (June 2013), https://www.ftc.gov/sites/default/files/documents/public_statements/section-5-recast-defining-federal-trade-commissions-unfair-methods-competition-authority/130619section5recast.pdf

Simple but Wrong, or Complex but More Accurate? The Case for an Exclusive Dealing-Based Approach to Evaluating Loyalty Discounts, Bates White 10th Annual Antitrust Conference (June 2013), https://www.ftc.gov/sites/default/files/documents/public_statements/simple-wrong-or-complex-more-accurate-case-exclusive-dealing-based-approach-evaluating-loyalty/130603bateswhite.pdf

Broadband Policy & Consumer Welfare: The Case for an Antitrust Approach to Net Neutrality, George Mason University Information Economy Project Conference on US Broadband Markets (April 2013),

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What Role Should Antitrust Play in Regulating the Activities of Patent Assertion Entities?, Dechert Client Annual Antitrust Spring Seminar (April 2013),

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What’s Your Agenda?, American Bar Association Section of Antitrust Spring Meeting (April 2013), https://www.ftc.gov/sites/default/files/documents/public_statements/whats-your-agenda/130411abaspringmtg.pdf

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COMMENTARY

The Internet isn't broken. Obama doesn't need to 'fix' it (with Ajit Pai), CHICAGO TRIBUNE (February 18, 2015)

Micromanaging the Web Would Be a Macro Mistake (with Thomas W. Hazlett), THE WALL STREET JOURNAL (July 13, 2014)

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First Microsoft, now Google: Does the government have it in for consumers?, CNET NEWS (with Geoffrey Manne and Berin Szoka) (July 2, 2011)

Durbin's antitrust fantasies, THE WASHINGTON TIMES (with Todd Zywicki) (June 17, 2010)

The Return of "Big is Bad," THE DEAL MAGAZINE (with Keith N. Hylton and Geoffrey A. Manne) (May 26, 2009)

U.S. Antitrust Becomes More European, FORBES.COM (with Keith N. Hylton and Geoffrey A. Manne) (May 18, 2009)

Hell No, Don't Let Them Go!, CHICAGO TRIBUNE (with Thomas W. Hazlett) (May 8, 2008)

WORKING PAPERS

Tastes Great, Less Filling: The Effects of Contract Regulation on Beer Consumption (with Jonathan Klick)

Grocery Bag Bans and Foodborne Illnesses (with Jonathan Klick) (under review)

Disclosure as Product Design: When Conveying Information Affects the User Experience (with Daniel O'Brien)

Whither Antitrust Safe Harbors (with Lindsey M. Edwards)

What's Unfair under State CPAs? Economists Versus Lawyers (with Elise M. Nelson)

The Law and Economics of Net Neutrality Revisited (with Tom W. Hazlett)

RESEARCH PROJECTS IN PROGRESS

Causal Inference in Antitrust Event Studies (with Jonah Gelbach and Jonathan Klick)

The Economics of Privacy and Unfairness Analysis (with Daniel O'Brien)

ACADEMIC PRESENTATIONS

Introduction to Economics and Economic Thinking; Price Versus Non-Price Competition; Error Costs, Optimal Penalties, and Antitrust; Antitrust Market Power and Market Definition, and The Relationship Between Market Structure and Market Power; Vertical Arrangements, Exclusion, and Competition on the Merits; Intellectual Property and Antitrust; The Economics of Standard Setting Organizations; Antitrust and Intellectual Property Litigation

Global Antitrust Institute Conference for Competition Enforcement Officials (May 2015)

Expertise and the Case for Limits on Agency Discretion: Some Evidence from the FTC

University of Michigan Law and Economics Workshop (April 2015)

Regulation in High-Tech Markets: Public Choice, Regulatory Capture, and the FTC

Clemson University Department of Economics Seminar (April 2015)

Economic Analysis of Legal and Public Policy Issues

Global Antitrust Institute, Law & Economics Center, and George Mason University – Economics Institute for Competition Judges (March 2015)

Disclosure as Product Design: When Conveying Information Affects the User Experience

University of Virginia School of Law Symposium (October 2014)

Agency Expertise and the Need for Limits on Agency Discretion: Some Evidence from the FTC

University of Pennsylvania Law School Program on Regulation (September 2014)

Do Expert Agencies Perform Better Than Generalist Judges? Evidence from the Federal Trade Commission

Law and Society Annual Meetings (June 2012)

George Mason University Levy Workshop in Law and Liberty (February 2012)

George Mason University School of Law FTC Conference (October 2011)

State Regulation of Alcohol Distribution: The Effects of Post and Hold Laws on Output and Social Harms

Southern Economic Association Meetings (November 2012)

George Washington University Department of Economics (March 2012)

American Law and Economics Association Annual Meeting (May 2011)

Conference on Empirical Legal Studies (November 2010)

United States Department of Justice Antitrust Division (October 2010)
George Mason University School of Law Levy Workshop (September 2010)
Washington University at St. Louis Law and Economics Workshop (September 2010)

Behavioral Economics, Law, and Liberty

Mont Pelerin Society Annual Meetings (October 2010)
George Mason University School of Law (September 2010)

Misbehavioral Economics: The Case Against Behavioral Antitrust

Canadian Law and Economics Association Annual Meeting (October 2010)

Antitrust Sanctions

American Law and Economics Association Annual Meeting (May 2010)

Is Antitrust Too Complicated for Generalist Judges? The Impact of Economic Complexity and Judicial Training on Appeals

Southern Economic Association Annual Meeting (November 2010)
Georgetown University Law and Economics Workshop (October 2009)
Washington University at St. Louis Law and Economics Workshop (October 2009)
American Law and Economics Association Meetings (May 2009)
George Mason University Economics Department Public Choice Seminar (April 2009)
Stanford Law and Economics Workshop (January 2009)
University of Texas Law and Economics Workshop (December 2008)
UCLA Law and Economics Workshop (September 2008)
Northwestern University Law and Economics Workshop (September 2008)

Federalism, Substantive Preemption, and Limits on Antitrust: An Application to Patent Holdup

Tilburg Law and Economics Center (December 2008)
George Mason/ Microsoft Conference on the Law and Economics of Innovation (May 2008)
Duke University Law School Intellectual Property Symposium (February 2008)

The Effects of Contract Regulation in the Alcoholic Beverage Industry

Southern Economic Association Annual Meeting (November 2007)

Antitrust, Multi-Dimensional Competition, and Innovation: Do We Have An Antitrust Relevant Theory of Competition Now?

George Mason/ Microsoft Conference on the Law and Economics of Innovation (May 2007)

The Antitrust Law and Economics of Category Management

American Law & Economics Association Annual Meeting (May 2004)

The Economics of Slotting Contracts

Silicon Flatirons New Institutional Economics Conference (June 2009)

Peking University Conference on Chinese Anti-Monopoly Law (October 2007)

American Law & Economics Association 2005 Annual Meeting (May 2005)

International Society of New Institutional Economics 2004 Annual Meeting (September 2004)

George Mason University Law School Levy Workshop (March 2004)

Slotting Contracts and Consumer Welfare

First Annual Conference on Empirical Legal Studies (October 2006)

Southern Economic Association Annual Meeting (September 2006)

Southeastern Association of Law Schools Annual Meeting (July 2006)

American Law & Economics Association 2006 Annual Meeting (May 2006)

International Industrial Organization Conference (April 2006)

George Mason University Law School Levy Workshop (March 2006)

University of Texas Law School Center for Law and Economics (January 2006)

Behavioral Law and Economics, Paternalism, and Consumer Contracts: An Empirical Perspective

NYU Journal of Law and Liberty Symposium (October 2006)

The Roberts Court and the Chicago School of Antitrust: The 2006 Term and Beyond

William S. Boyd School of Law, UNLV (April 2008)

University of Missouri-Columbia School of Law (February 2008)

CONFERENCES AND TESTIMONY

Moderator, Concurrences and George Mason Law Global Antitrust Economics Conference
Panel on Market Definition and Market Power (May 2015)

Panelist, Penn Program on Regulation Dialogue on Regulatory Excellence (April 2015)

Panelist, Global Competition Review Live Annual IP & Antitrust USA Event Panel on IP and
Antitrust (April 2015)

Panelist, American Bar Association Section of Antitrust Spring Meeting Chair's Showcase
Session (April 2015)

Panelist, Stanford/ Hoover Conference on The American Innovation Machine (March 2015)

Panelist, United States House of Representatives Committee on the Judiciary Hearing on “Wrecking the Internet to Save It?: The FCC’s Net Neutrality Rule” (March 2015)

Panelist, Heritage Foundation Panel on Standard Setting and Patents (March 2015)

Panelist, American Bar Association Panel on The DOJ’s IEEE Business Review Letter (March 2015)

Panelist, George Mason Law Annual Antitrust Symposium (February 2015)

Panelist, Heritage Foundation Conference on Obama Administration Antitrust Policy (January 2015)

Panelist, Thomas Reuters Information Society Project Panel on Net Neutrality (November 2014)

Moderator, Federal Trade Commission Symposium: FTC @ 100 Panel on Remedies (November 2014)

Panelist, Georgetown University Law Center Conference on Hot Topics in Antitrust (September 2014)

Panelist, Intellectual Property Owners Association Annual Meeting (September 2014)

Panelist, United States House of Representatives Committee on the Judiciary Subcommittee on Regulatory Reform, Commercial and Antitrust Law Hearing on “Net Neutrality: Is Antitrust Law More Effective Than Regulation in Protecting Consumers and Innovation?” (June 2014)

Panelist, American Tort Reform Association Roundtable on State Consumer Fraud Statutes (April 2014)

Panelist, The Mentor Group Brussels Privacy Forum on Defining Unfair Methods of Competition (April 2014)

Panelist, Concurrences Conference on the New Frontiers of Antitrust (February 2014)

Panelist, George Mason Law and Economics Symposium on the FTC at 100 (February 2014)

Panelist, Stanford Institute for Economic Policy Research Conference (January 2014)

Panelist, AEA/ ASSA Session on Antitrust Enforcement in Rapidly Changing Industries (January 2014)

Panelist, United States House of Representatives Committee on Energy and Commerce Subcommittee on Commerce, Manufacturing, and Trade Hearing on “The FTC at 100: Where Do We Go From Here?” (December 2013)

Panelist, The Federalist Society for Law & Public Policy Studies National Lawyers Convention (November 2013)

Panelist, George Mason Law and Economics Center Symposium (November 2013)

Panelist, Jevons Institute for Competition, Law and Economics Workshop on Intellectual Property & Antitrust (November 2013)

Panelist, Fordham Competition Law Institute Conference on International Antitrust Law and Policy (September 2013)

Panelist, Technology Policy Institute Aspen Forum (August 2013)

Panelist, American Bar Association Post-Annual Conference (August 2013)

Panelist, George Mason Law CPIP Fellowship Conference (July 2013)

Panelist, American Bar Association Symposium on Retrospective Analysis of Agency Determinations in Merger Transactions (June 2013)

Panelist, Sidley & Austin Panel on Reverse Payments (June 2013)

Panelist, MIIT/ EIPC Workshop on Antitrust Policy on the Internet Industry (February 2013)

Panelist, Global Competition Review Antitrust Leader’s Forum (February 2013)

Panelist, Second Annual George Mason Law and Economics Conference on Competition, Search, and Social Media (May 2012)

Panelist, Federalist Society Debate on Google and Antitrust at Columbia Law School (January 2012)

Panelist, AALS Annual Meeting: Behavioral Economics and Antitrust (January 2012)

Panelist, George Mason Law and Economics Center Conference on The Law and Economics of Search Engines and Online Advertising (June 2011)

Panelist, United States House of Representatives Committee on the Judiciary Subcommittee

on Intellectual Property, Competition and the Internet Hearing on “How Will the Proposed Merger Between AT&T and T-Mobile Affect Wireless Telecommunications Competition?” (May 2011)

Panelist, The FCC’s Wireless Competition Report: A Preview (May 2011)

Panelist, George Mason Law and Economics Center Conference on Behavioral Economics and the Consumer Financial Protection Bureau (March 2011)

Panelist, The Federalist Society Program on the FTC and The Internet (January 2011)

Panelist, The Federalist Society Program on Regulation of the Internet (December 2010)

Panelist, Stanford/ Hoover Conference on Patents, Innovation and Business (June 2010)

Panelist, DOJ/FTC Proposed Merger Guidelines Workshop (January 2010)

Panelist, LECG Consumer Protection and Antitrust Conference (October 2009)

Panelist, Technology Policy Institute Conference on High-Tech Antitrust (October 2009)

Panelist, SEALS Empirical Legal Research Workshop (August 2009)

Panelist, ICANN Workshop on Economic Analysis of Vertical Separation for New gTLDs (June 2009)

Panelist, Cato Institute Program on Antitrust in the New Administration (June 2009)

Panelist, FTC Workshop on Resale Price Maintenance (May 2009)

Panelist, Searle Center Conference on Antitrust Law and Economics (September 2008)

Panelist, FTC at 100 Conference (September 2008)

Panelist, Federalist Society Conference on Intellectual Property (July 2008)

Panelist, SIEPR/ Hoover Institution Conference on the Modernization of Antitrust (May 2008)

Panelist, Searle Center Research Roundtable on the Theory of the Firm (March 2008)

Panelist, Searle Center Research Roundtable on the Law and Economics of Innovation (January 2008)

Panelist, Searle Center Conference on The End of the Microsoft Consent Decree (November 2007)

Panelist, DOJ/FTC Hearings on Sherman Act Section 2 and Single-Firm Conduct
(November 2006)

Panelist, George Mason Law Review Fall 2006 Antitrust Symposium (September 2006)

PROFESSIONAL ACTIVITIES

Co-Director, Robert A. Levy Fellowship in Law & Liberty at George Mason (2011-2013)

Co-Editor, Supreme Court Economic Review (Volume 20-22)

Senior Editor, *Antitrust Law Journal* (until January 1, 2013)

Associate Editor, *International Review of Law and Economics* (until January 1, 2013)

Referee, *Journal of Law and Economics*, *American Law & Economic Review*, *Review of Law and Economics*; *Supreme Court Economic Review*, *International Review of Industrial Organization*, *Review of Industrial Organization*, *Journal of Legal Studies*, *Yale Law Journal*, *Harvard Law Review*

PROFESSIONAL EXPERIENCE

Senior Consultant, Charles Rivers Associates, Inc. (October 2009 – January 2013)

Consultant, Federal Trade Commission (July 2008-April 2009)

Law Clerk to the Honorable James V. Selna, U.S. District Court for the Central District of California (2003-2004)

Consultant, Economic Analysis, LLC (1998-2002)

Summer Associate, Latham and Watkins (2001)

Summer Associate, Jones Day Reavis & Pogue (2000 and 2001)

Honors Paralegal, Federal Trade Commission, Bureau of Competition (1998)

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AFFILIATIONS AND MEMBERSHIPS

International Industrial Organization Society

American Economics Association

Southern Economic Association

International Society of New Institutional Economics

American Law and Economics Association

Federalist Society

California Bar Association

Washington D.C. Bar Association

Fifth Circuit Court of Appeals

American Bar Association

BEFORE THE
SURFACE TRANSPORTATION BOARD

Ex Parte No. 705

COMPETITION IN THE RAILROAD INDUSTRY

VERIFIED STATEMENT

OF

JAMES R. YOUNG

VERIFIED STATEMENT
OF
JAMES R. YOUNG

My name is Jim Young. I am Chairman, President, and Chief Executive Officer of Union Pacific Corporation and Union Pacific Railroad Company. I started my railroad career with Union Pacific in 1978. Before assuming my present positions, I held a variety of management positions, including Vice President – Re-engineering and Design and Vice President – Customer Service Planning and Quality of Union Pacific Railroad, and Chief Financial Officer of Union Pacific Corporation.

I witnessed first-hand how the regulatory reforms of the Staggers Rail Act freed Union Pacific and other railroads to respond to the marketplace as other companies do and provided incentives for railroads to invest in their networks. Union Pacific is using those freedoms well to serve our customers and to enhance the nation’s transport infrastructure. With improving revenues, Union Pacific has invested nearly \$30 billion in its rail network since 1999, helping us provide value to our customers in recent years with the best service in memory. If the Surface Transportation Board turns back the clock by layering new regulation on the rail industry, our investments and our accomplishments for customers will be in jeopardy. The “access” measures now under consideration would reduce rail investment and cripple the efficiency, service, and safety gains that regulatory reform delivered.

OVERVIEW

This proceeding raises the question whether regulatory reform should be reversed because it is succeeding. Railroads are emerging as the vigorous competitors Congress hoped

for when it passed the Staggers Act 30 years ago, and rail competition is stronger than ever. Union Pacific is a prime example. Lance Fritz, Union Pacific's Executive Vice President – Operations, explains in his statement that in the post-Staggers Act period Union Pacific greatly improved its network and today provides record levels of customer service and safety. In the past two years alone, we invested approximately \$5 billion — despite the worst recession in 80 years — to improve and expand our network and service. This year we intend to invest well over \$3 billion — a record — to further improve safety, productivity, and customer service, as well as to expand our network for traffic growth.

In the current regulatory environment, the rail industry has blossomed, moving from the depths of the pre-Staggers Act era to provide vibrant competition and a critical contribution to our nation's economic growth today. Board regulations provide effective remedies for shippers that believe their rates are too high or that a railroad is engaging in competitive abuses. This regulatory regime has been a tremendous success for shippers, railroad employees, and the public. We should not forget that most rail rates remain well below inflation-adjusted rates from 1980.

Apparently some believe, however, that instead of celebrating this public policy success, regulators should dismantle the achievement. The Board is now considering whether to change the rules to permit solely-served shippers to insist that a second railroad access their facilities (“forced access”) or to dictate interchange of their traffic where they choose (“forced interchange”). The goal of those who advocate forced access and interchange is to reduce rates and transfer revenue from railroads to certain shippers.

If the Board signals that it is no longer committed to allowing railroads to operate under market conditions, our shareholders will demand that we curtail capital investment. As

Union Pacific has explained many times, while the Board has regulatory powers over railroads, it has no ability to govern the behavior of the financial markets. The financial markets will withdraw capital from the railroad industry if the government decides to artificially suppress rail revenues. The markets would also increase our cost of capital in terms of both higher borrowing costs and higher required equity returns.

We understand why shippers, reasonably enough, prefer lower prices (although many choose better service over lower rates). Most shippers may not understand, however, that these potential regulatory changes could devastate the rail network by imposing inefficient operations on rail carriers and degrading service to all shippers. The proposals would reduce our ability to invest and would make many investments uneconomic.

The Board has little margin for error here. If it changes the regulatory landscape in a way that curtails Union Pacific's opportunity to earn market-based rates of return on investment, we will reduce our capital investments. We are prepared to curtail investment this year, depending on the outcome of this proceeding. I do not say that to be belligerent or provocative. We will have no choice. Investors withdrew private investment in the past, due to ill-advised regulation, and they will again. That is the central message of the pre-Staggers Act era, and it remains true today.

Union Pacific is equally concerned about the effects of access regulation on network efficiency and customer service. Like other railroads, Union Pacific spent tens of billions to create a rail network out of its component railroads, a network designed to maximize efficient rail operations and customer service. If regulators or shippers can decide that traffic should move over different routes and interchanges, without regard to network efficiency or where we invested, rail service could be crippled. Shifting traffic to routes and facilities where

we have not invested could overwhelm infrastructure that was never designed for those volumes and strand investments we made to provide better service.

At Union Pacific, we know from hard experience what happens when traffic volume outstrips infrastructure, creating service meltdowns. The types of new access regulation the Board is now contemplating would splinter traffic densities that are essential foundations for high levels of customer service and could cause meltdowns in major terminals like Houston.

Mr. Fritz describes these dangers in his statement.

As implemented by the Interstate Commerce Commission and the Board over the past 30 years, the Staggers Act has been a great success, providing a regulatory framework that allowed railroads to transform themselves into efficient, robust competitors. Now more than ever, as our country gradually emerges from a severe recession, we need strong, efficient railroads to keep economic recovery going. The Federal Railroad Administration recently concluded that freight railroad performance contributes importantly to U.S. competitiveness in a global economy.¹ It makes no sense to impose new regulation that will reduce incentives for rail investment. The Board must avoid adopting measures that would take us in the opposite direction from the one that has worked spectacularly well for three decades.

In the remainder of this statement, I will discuss the remarkable success of the Staggers Act and how proposals for forced access and forced interchange would reduce rail investment and hurt customer service. I will also explain why there is no justification for the Board to change course and open the railroad to new access.

¹ U.S. Dept. of Transportation, Federal Railroad Administration, National Rail Plan: Moving Forward 14 (Sept. 2010) (“National Rail Plan”).

I. THE POST-STAGGERS ACT REGULATORY REGIME IS A SUCCESS

A. Staggers Act Reforms Transformed Railroading and Gave Us the Opportunity to Grow Revenues and Investments

The Board must not lose sight of history's teachings. When I entered the railroad business in 1978, the rail industry was stagnant and mired in oppressive regulation. Railroads had little ability to respond to market conditions. Restrictive rules and misguided policies forced railroads to keep all routes open, with little ability to rationalize operations and consolidate traffic on more efficient routes. The result was a balkanized rail network, with the government propping up inefficient operations on marginal routes and over unnecessary interchanges — an outcome some propose to reinstate here.

Railroads could not earn adequate returns, and they therefore had little ability or incentive to invest in their networks. They deferred spending on infrastructure, causing even important rail lines to deteriorate. For example, Union Pacific's primary connection to Chicago, the Chicago & North Western, fell into disrepair, with one of the two tracks to Chicago under slow orders and the other surviving only on federal money. Union Pacific's Board of Directors saw little promise for the railroad business, given inadequate earnings and too much regulation. The Board of Directors also feared that the government might take over Union Pacific, just as it would soon assume responsibility for passenger service and most northeastern freight railroads. Reflecting that pessimism, Union Pacific's management created a holding company in 1969 so that it could invest in profitable non-railroad businesses, such as natural resources, without fear of nationalization. Even at Union Pacific, America's healthiest railroad at the time, money flowed out of railroading and into more promising ventures.

The Staggers Act and the regulatory regime that followed transformed the industry. Importantly, railroads gained the ability to rationalize their networks by abandoning

under-used track, eliminating inefficient routes, extending single-line movements, and consolidating traffic to produce higher densities and more efficient service. Railroads also gained rate flexibility, so they could price to meet competition. Contract rates took the place of general rate increase proceedings and rates set through rate bureaus. The regulatory environment under the Staggers Act recognized that railroads must price their services on the basis of demand if they are to make the expensive, private investments that railroading needed.

Our own experience echoed the industry's. Union Pacific rationalized its network, eliminated inefficient routes and interchanges, improved its infrastructure, and added capacity, allowing us to provide more valuable and efficient service. Lance Fritz's verified statement discusses some of these investments and improvements. Many of our investments and enhancements implemented the consolidations that the ICC and the Board approved and provided the predicted public benefits of those consolidations.² Beginning in 1982, we:

- integrated Union Pacific with Missouri Pacific and rebuilt the deteriorating Western Pacific;
- bankrolled CNW's build-in to the Southern Powder River Basin;
- rebuilt much of the Missouri-Kansas-Texas, which otherwise would have failed;
- acquired CNW and rebuilt its line to Chicago, as well as Iowa grain lines that CNW might have abandoned;

² The rhetoric in Washington about mergers reducing competition ignores the enormous benefits of the consolidations for shippers. Without mergers, for example, Southern Pacific, M-K-T, and probably CNW would have gone bankrupt and could not have afforded to rebuild their systems. No shipper lost competitive service as a result of the Union Pacific mergers, and the merged system is more competitive against trucks and BNSF. Mergers created new competition in the I-5 Corridor on the West Coast and for new shippers on over 4,000 miles of UP rail lines. The resulting Union Pacific provides better service, safer operations, and more technology than its components could have.

- added vast amounts of capacity to Union Pacific lines across Nebraska and Kansas, installing a 108-mile triple-track on the world's busiest freight corridor; and
- integrated our system with the Southern Pacific, upgrading its infrastructure and offering shippers more efficient single-line routes and other service improvements.

We were able to make these investments because our shareholders and the capital markets believed we would have the opportunity to earn market-based returns.

As our service improved, we attracted more business. Once Union Pacific's parent company began to see a good prospect of earning a competitive return from rail operations, it gradually spun off the non-transportation businesses it had turned to in the pre-Staggers Act period and refocused its attention on the railroad.

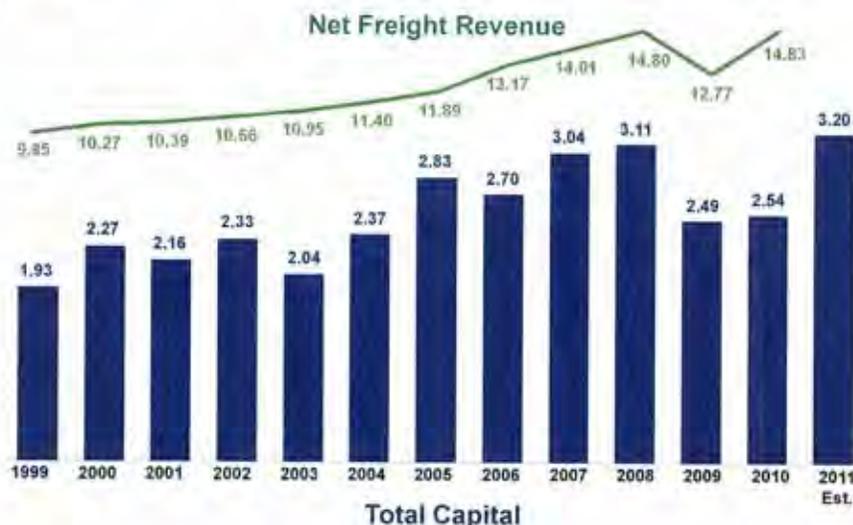
B. Our Improved Financial Condition Allows Us to Increase Capital Expenditures

Union Pacific's financial situation has improved gradually, but even now it is still not where it needs to be. The Board's measure of revenue adequacy is based on book value, and fails to account for the high replacement costs we must pay every day. Even using the Board's measure, however, Union Pacific's return on investment reached the cost of capital in only one year, 1995. Nevertheless, as our earnings increased in the post-Staggers Act period, we invested more in our system. We have continued to make large capital investments in our network, spending not only to restore and replace our system, but also to add new capacity (both track and equipment) to improve service and accommodate traffic growth.

As shown in the chart below, between 1999 and 2010 Union Pacific devoted approximately \$30 billion to capital expenditures, with investment levels generally tracking freight revenue. This figure included nearly \$10.3 billion in expansion capital (capital investments that increase Union Pacific's line or terminal capacity). Our total capital

expenditures for this period consumed 18 percent of our revenue (or 21 percent of revenue net of fuel surcharges). By comparison, the average U.S. manufacturer devoted about 3 percent of revenue to capital spending.

UP Capital Commitments vs. Net Freight Revenue
(Includes Long-Term Leases and PTC Investments)
In Billions



From 1999 to 2008, our capital expenditures grew by 63 percent, reaching a high of \$3.1 billion in 2008. When the recession pummeled carloadings and our earnings fell, we pulled back on investment. It was prudent to preserve liquidity when there was widespread concern about the possibility of a double-dip recession. There was also no need to spend as much when, at the bottom of the recession, Union Pacific had as many as 2,100 locomotives and 71,000 freight cars in storage and enough line and terminal capacity to accommodate at least 50,000 more carloadings per week. Our capital spending remained robust, though, at around \$2.5 billion annually during 2009 and 2010. As carloadings return and revenues grow, we plan to invest a record \$3.2 billion in 2011. We have publicly told the investment community that we expect to continue to spend 17 to 18 percent of our growing revenues on capital investments for

the next several years, the economy and regulation permitting. In other words, we expect capital spending to keep pace with revenues.

Mr. Fritz's statement describes many of the capital projects we undertook in recent years to increase efficiency and improve service for our customers — projects we could fund because of growing revenues. We continue to identify new capital projects that will increase productivity, allow us to provide quality service for our customers, and expand our offerings. In addition, as Mr. Fritz's statement describes, we developed transportation plans and implemented new management processes to maximize productive use of our resources, reduce interruptions to shipments, and otherwise improve the value we bring to our customers.

These investments and improvements have paid off in important ways for our customers, our employees, and our investors. Mr. Fritz's statement describes the many ways in which the railroad's performance has improved in recent years, resulting in better service for our customers and higher levels of safety for our employees. In 2009 and 2010, we achieved all-time highs in our service delivery index (which measures the overall quality of our service), as well as record velocity levels, record reliability, reduced slow orders, and other service "bests." Our work force also set records for employee safety in 2009 and again in 2010.

I see the results of our capital investments and our other efforts to improve service in the high levels of customer satisfaction ratings we received in recent years. Our ratings on customer satisfaction surveys have risen to the highest level we have seen since we began conducting the surveys 20 years ago. In addition, when I speak with our customers one-on-one, they tell me how pleased they are with our performance and that our service levels have persuaded them to give us more business. Many focus on the additional value we provide because our service reduces their logistics costs or allows them to reach new markets or

suppliers. For me, this is the best evidence of how far we have come under the post-Staggers Act regulatory framework. But we cannot let our customers down again.

II. FORCED ACCESS AND FORCED INTERCHANGE WOULD REDUCE INVESTMENT AND SERVICE

Shipper groups calling for changes to the regulatory framework likely do not understand the consequences. Granting solely-served shippers the right to require a railroad to provide reciprocal switching and terminal trackage rights or to dictate interchange points would move the industry backward, both by artificially reducing rail revenues and by damaging efficient service. The Staggers Act allowed railroads to stop behaving inefficiently, but some want to turn the clock back to an era of poor service and poor performance.

A. Reduced Revenues Will Reduce Capital Investment

When I visit our customers, they applaud our capital investments and urge us to make sure that we will have capacity for their shipments in the future. To do this, we must first invest huge amounts of capital just to replace our existing assets. We constantly replace and upgrade rail, ties, bridges, and yard facilities and acquire or overhaul locomotives and cars. As Mr. Fritz's statement describes, we also have ambitious plans to handle anticipated traffic growth and provide additional value to customers. If the Board were to adopt broad forced access and forced interchange measures of the sort some shippers want, though, Union Pacific would reduce investment and would have much less incentive to invest in the future.

1. Expanded Regulation Would Reduce Rail Revenues

Advocates of forced access and interchange want the Board to change the rules so that Union Pacific and other railroads earn less. The result would be to leave us with less to invest in rail infrastructure. The purpose behind any forced access or forced interchange proposal is for solely-served shippers to pay less to move goods. Shippers advocating those

changes hope to reduce their rates, either by negotiating lower rates due to government-imposed “competition” or by bringing rate cases against “bottleneck” rates and obtaining rate prescriptions more favorable than they could obtain by challenging through rates. Another crucial ingredient of government-created “competition” is access fees set at artificially low levels, further depleting rail revenues. Without below-market access pricing, the artificial competition would not generate a large enough revenue transfer to satisfy proponents.

Meanwhile, railroad costs would increase, further depleting revenues. As Mr. Fritz explains in his statement, shippers are likely to make routing and access decisions favorable for them individually, but not for the rail network as a whole. Our unit costs would rise as we move backward toward pre-Staggers Act inefficiencies.

Rate compression and higher costs can result only in driving down revenues — a forced economic transfer by regulation. Proponents may claim that any lost revenue from the traffic Union Pacific loses could be made up by revenue on traffic diverted to us from other railroads. But shippers would not divert traffic to Union Pacific unless they would pay less in total, partly by avoiding payment of the market price for use of another railroad’s assets. If the access option were truly more efficient, the two railroads would have offered a joint route or agreed to some type of joint facility already. The bottom line is that the proposals for forced access and forced interchange are aimed at having shippers pay less for transportation, in the face of added costs of hand-offs from one railroad to the other and of less efficient networks.

Rate increases for those shippers who have more options are not a solution. Shippers who do not wish to pay higher rates and who have alternatives, such as trucks or barges or a different source or product, will turn to those alternatives. We already have every incentive to price their traffic to maximize revenue without losing too much traffic. So we would have no

alternative but to reduce investment, and our rail franchise would shrink. We would serve fewer shippers and provide less service at the same time that the marketplace and government transportation authorities are telling us they want more freight on rail, not less.

2. Lower Returns on Investment and Less Cash Would Lead to Less Rail Investment

For both shareholders and lenders, it comes down to cash and returns. Our shareholders, and our lenders, want to know how much cash we are generating today, and, more importantly from their perspective, how much cash can they expect us to generate in the future. Our lenders want to know how likely we are to meet our future debt obligations on the money we borrow today. Our shareholders want to know if we will generate enough cash in the future to make us a good investment today. When they invest in our stock, they are taking an ownership position in our company. They expect us to generate enough cash going forward to increase the value of that ownership. We do this by spending wisely on growth capital opportunities that will improve our business and earn more in the future, and by running the company well enough to have some cash left over to return directly to them, i.e., a cash return.

Investors have the choice of investing in any public company or industry, and they assess the returns they can expect across their various investment alternatives in making that choice. Railroads already have a high cash hurdle because so much of the cash we generate must go back into capital expenditures. After including the other costs of running a business, such as labor and other operating costs, taxes, and pension contributions, the cash remaining for our shareholders is already relatively small. One measure investors consider is the excess cash generated as a percentage of a company's total assets. Cash returns on assets for other representative large industrial companies averaged about 6 percent in 2010, compared to 4.7 percent for Union Pacific. In recent years, our returns have been improving, which gives

investors hope that they can expect stronger returns in the future. Even with recent success in improving returns, however, our earnings do not generate enough cash to generate an adequate return for our owners when the high cost of replacing our assets is considered.

Investors watch closely for any changes that would reduce our future cash returns. Expanded regulation would directly impact our cash generation by driving down the revenue we earn, while at the same time increasing our operating costs through forced inefficiencies. With less cash available, our shareholders will insist that we reduce capital expenditures.

This is not idle speculation. Already, Wall Street analysts and our major shareholders are keeping a close eye on this proceeding. Analysts regularly discuss regulatory proposals and their likely effects on rail earnings. They ask us about regulatory developments during our quarterly conference calls and presentations. Our major shareholders tell us they are very concerned about any regulatory changes that will reduce our prospects for returns in the future.

3. Uncertainty About Returns on Individual Replacement and Capacity Projects Would Discourage Investment

Forced access and forced interchange options would increase the uncertainty that Union Pacific and other railroads face in considering each investment. This includes uncertainty about how much and where to invest in line capacity and terminals and how much to spend on replacing assets. We would have little or no incentive to invest in an asset that a competitor can use at a regulated, bargain price. And if shippers can decide to move traffic to less efficient routes that they may use only briefly or for which they will pay only artificially low access fees, we cannot justify investing.

In addition, we would face uncertainty about whether we would achieve projected cost savings from investments. Many capital projects are justified primarily because we expect

they will produce lower costs. Other projects pass muster only because the combination of anticipated revenue and cost savings allows them to exceed our hurdle rate. If shippers gain the ability to overrule our decisions on how to operate trains and to design service, our ability to estimate cost savings from investments will diminish.

If we cannot count on market-driven traffic flows or rates, we could not make rational decisions about where to invest in new capacity. We would find it increasingly difficult to predict which lines, yards, and interchanges will be used in the future and therefore should be investment priorities. Likewise, it would be more difficult to determine where to place more train crews to provide service for new reciprocal switches or interchange operations. Unless access prices were set at economically efficient levels (which advocates of more regulation oppose), forced access and interchange are investment killers.

4. The Public Interest Favors More Railroad Investment, Not Less

Adopting measures that would discourage rail investment would be poor public policy. Just a few years ago, a national commission reported on the urgent need for massive infrastructure investment in the United States, including investment to improve freight rail capacity.³ The Federal Railroad Administration also stresses the need for more rail capacity.⁴ Recently, the President emphasized the importance of new infrastructure investment in his State of the Union address. Infrastructure needs, including new construction to expand freight transportation capacity, are a national priority.

³ National Surface Transportation Policy and Revenue Study Commission, *Transportation for Tomorrow*, Vol. II, at 4-13 to 4-19 (Dec. 2007).

⁴ National Rail Plan, at 6, 8-9.

As the Federal Railroad Administration reminds us, investment in freight railroads serves many vital interests.⁵ Healthy freight railroads are important to the economic health of our nation and to the global competitiveness of U.S. companies. Putting more freight on the rails helps reduce highway congestion. Moreover, rail is a particularly fuel efficient form of transportation, so moving more freight by rail diminishes U.S. dependence on foreign oil. Rail also helps cut highway emissions, producing health benefits and reducing greenhouse gases.

The ongoing budget battles in Washington underscore the importance of encouraging private investment in rail infrastructure. A government that is borrowing 40 cents of every new dollar it spends will not increase, or even maintain, funding for subsidized trucks, barges, or air transport. Reducing rail investment would damage American competitiveness on the world stage and damage the U.S. economic recovery. Board actions that reduce investment incentives would hurt the nation for years, if not decades.

For all these reasons, the Board must avoid discouraging investment in railroads. The access measures under consideration here would push more traffic onto the highways, increasing congestion and placing more strain on our already burdened and under-funded highway infrastructure. The nation's dependence on foreign oil would increase, and there would be more emissions. Clearly, the Board should be looking for ways to encourage investment in rail capacity, not taking steps that are likely to discourage it.

B. Expanded Regulation Will Endanger Service and Efficiency

Mr. Fritz's statement explains how forced access and forced interchange requirements would create serious problems for Union Pacific's rail operations (as well as those

⁵ See *id.* at 5-8, 18 and 25.

of other railroads). We operate a highly complex network, and we have invested billions of dollars in tailoring it to provide better, more efficient service. We also have devoted great effort to managing the network in a way that reduces costs and improves service. As Mr. Fritz describes, we structure our operations carefully and invest capital selectively, all with the goal of producing maximum value for our customers and maximum efficiency for our operations.

Giving shippers the ability to force access by other railroads or to force the use of specified interchanges would cripple the valuable services we provide to our customers. Instead of advancing efficient operations to reduce costs and enhance service, as we have done with our transportation planning and nearly \$30 billion in investments since 1999 alone, we would lose control of transportation planning and service delivery. Our operations would become more complex, and traffic flows would be fractured and less efficient. Those changes would increase costs and diminish service over the entire system, affecting all shippers. Shipments would move more slowly. Shipper-owned cars would be used less efficiently. Reliability would decline. We know this because, under pre-Staggers Act government restraints, railroads operated that way.

Moreover, our reduced ability and incentive to invest in infrastructure would affect our operations and customer service. We learned this lesson from painful service failures. Most notably, major causes of the post-merger service crisis in 1997 and 1998 included an under-maintained Southern Pacific network; shippers shifting traffic from Southern Pacific to Union Pacific routes in search of better service; a simultaneous traffic surge; and lengthy repair curfews to rebuild Southern Pacific's route west of New Orleans. Service at our Houston facilities melted down because the infrastructure was inadequate, and service problems cascaded throughout our system and beyond to connecting railroads, resulting in a national rail service crisis. Our 2003-05 service problems, when we did not have enough crews to handle traffic

growth in our western region, gave us another sobering lesson in the importance of adequate investment and careful network planning. Congestion can develop quickly in a complex, interconnected rail network. Allowing shippers to override our service design plans and reroute cars without regard to infrastructure and resource constraints would leave the rail system vulnerable to systemic weakness and failures. Service crises would be more likely.

Forced access and forced interchanges have the potential to return the rail industry to the balkanized routing patterns of the pre-Staggers Act era and otherwise interfere with quality service. To avoid responsibility for causing such harms, the Board should decline to impose regulation that presents so many risks for railroads and their customers.

III. THERE IS NO NEED FOR NEW REGULATION

The Board should not risk the consequences I have described, because there is no need for forced access and forced interchange. With rates below 1980 levels, adjusted for inflation, and rate regulation that already is painful for railroads, additional regulation serves no desirable purpose.

Moreover, Union Pacific faces robust and pervasive competition today. Most Union Pacific customers have access to more than one railroad, either directly or through a transload or intermodal option. (Our Union Pacific Distribution Services subsidiary is extending transloading and logistics services to a wide variety of customers, many of whom are served by other railroads, and intermodal service is drawing some carload shipments into trucks and containers.) Most of our customers have trucking and other options. As Eric Butler, who leads our Industrial Products group, testified in the exemption hearing in February, we must replace 10 percent or more of our Industrial Products business each year because of competition from other railroads and motor carriers. Some shippers who claim that they have no options, including

aggregates shippers, not only tell us about their truck options but also sometimes prove the point by moving product by truck.

Where a shipper is served only by Union Pacific, it is not because we have taken steps to shut out other railroads. Rather, it is because demand is insufficient to induce private capital to fund multiple railroad service. Many of these shippers have access to some form of competing service, via truck or water, and can use alternative sources or production facilities. Even solely-served shippers without good alternatives have bargaining leverage in negotiations. We are always sensitive to the need to keep our customer competitive — an important constraint on our rates.

I meet with many of our customers, often at the level of the President or Chief Executive Officer. At that level, most of our customers understand that we must increase revenues in order to invest more, and they are not concerned with forced access and forced interchange. Their greater concern is whether Union Pacific will continue to invest in their future, so that they can count on reliable service that allows them to be competitive and to expand their businesses. Preserving a regulatory framework that serves those interests, by encouraging rail investment and operational efficiency, should be the Board's top priority.

CONCLUSION

As I mentioned at the outset, the Board has very little room to get things wrong in this proceeding. It must avoid actions that are likely to discourage investment in the rail network and to take the industry backward to a time of government-compelled inefficiency.

Understandably, some shippers with limited rail options want changes to the regulatory scheme to improve their own economics. But the changes they propose would hurt all shippers, including them. Railroads need differential pricing and the freedom to choose efficient routes in

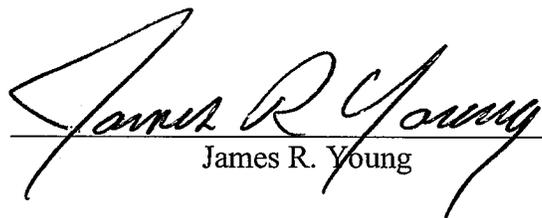
order to maintain a robust rail system with a high level of customer service. Adopting measures that will artificially depress rates or force less efficient, balkanized routes will threaten the important progress Union Pacific and other railroads have made since the Staggers Act.

If Union Pacific cannot look forward to earning market-based returns on its investments, but instead is limited to artificially constrained returns, we will have no choice but reduce investment, to the detriment of all shippers and the public interest. Important capital projects will go unfinished, and traffic will move to other modes (increasing highway congestion and emissions), as investors move their funds to other, more promising options. Imposing regulation that interferes with natural market forces will lead to retrenchment, removing our ability to accommodate traffic growth and significantly reducing efficiency and customer service levels. In the long run, new regulation of the sort the Board is considering would return railroads to the pre-Staggers Act days of disinvestment, poor service, and stagnation — a result wholly contrary to the public interest.

VERIFICATION

I, James R. Young, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this Verified Statement.

Executed on April 11, 2011.


James R. Young

BEFORE THE
SURFACE TRANSPORTATION BOARD

Ex Parte No. 705

COMPETITION IN THE RAILROAD INDUSTRY

VERIFIED STATEMENT

OF

LANCE M. FRITZ

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VERIFIED STATEMENT

OF

LANCE M. FRITZ

My name is Lance M. Fritz. I am Executive Vice President - Operations for Union Pacific Railroad Company. I have overall responsibility for Union Pacific's rail operations throughout our 23-state rail network. I am in charge of all transportation services, including management and maintenance of locomotives, rail cars, tracks, train dispatching, and crew calling.

I began my career with Union Pacific in Marketing and Sales in 2000 as Vice President and General Manager - Energy. In 2005, I moved to the Operating Department as Regional Vice President - Northern Region, where I was responsible for the day-to-day safe operations of trains in Colorado, Iowa, Illinois, Kansas, Minnesota, Missouri, Nebraska, Wisconsin, and Wyoming. In 2006, I became Regional Vice President - Southern Region, which includes Arkansas, Kansas, Louisiana, Oklahoma, and Texas. In 2008, I was named Vice President - Labor Relations, responsible for negotiation and administration of all collective bargaining agreements with Union Pacific's more than 40,000 unionized employees. In January 2010, I was named Vice President - Operations. I was promoted to my present position in September 2010.

I understand that the Surface Transportation Board is considering changes to its rules about when a railroad must give access to a competing railroad. The changes could force railroads to interchange traffic that they could otherwise handle in single-line service, that is, without interchanging with another railroad ("forced interchange"). They could also force railroads to enter into terminal switching or trackage rights arrangements that would give a

second railroad access to solely-served shippers (“forced access”). Those proposals would threaten safety, degrade service, and destroy efficiency.

I. OVERVIEW

Union Pacific is operating at record high levels of safety and service, providing greater value to its customers than ever before. In large part, these accomplishments are a result of regulatory policies that allowed us to earn revenues needed to invest in our network and to plan the flow of traffic over our network. By coordinating our investment and transportation plans, we have improved the efficiency and predictability of our network, which in turn produces better safety and service. We invested for and are providing the single-line service benefits that the Interstate Commerce Commission and the Board sought in every major rail consolidation since 1980. This progress would be reversed if shippers could force us to provide access to other carriers without any regard for the impact on network operations or on other shippers that depend on our service.

Safety is a foundation of our business and our service to customers. We view safety and service as co-dependent goals: improvements in safety produce improvements in service, and improvements in service produce improvements in safety. By routing traffic to concentrate density on preferred routes, we have been able to systematically rebuild and replace old infrastructure, using new and better components and technology that enhance safety as well as service. We have also been able to standardize operations. As operations become more predictable, consistent, and repeatable, they become safer and more productive. Union Pacific and its employees have reduced reportable personal injury and reportable rail equipment incident rates to record-low levels.

We are driven to provide customer value, and our service levels are as high as they have been since Congress enacted Staggers in 1980, improving steadily since 2005. Our customers

recognize the value of our service, awarding us a best-ever average score on our Customer Service Index in 2010.

Union Pacific has spent the past several decades building and restructuring our network and improving transportation plans to match our resources with customer needs. Since 1980, we have consolidated six railroads into an efficient system, removing bottlenecks and inefficient operations, including unnecessary interchanges, and increasing single-line service. Although we stumbled in getting here, Union Pacific today is more effective than the sum of the individual merged railroads. We have been able to provide safer, better, and expanded service because of our ability to leverage the economics of consolidation.

Since 1999, we have invested almost \$30 billion of capital. We aligned our capital spending with our basic operating strategy of concentrating traffic where possible on higher-capacity, higher-density corridors. We invested heavily in modernizing and increasing the productivity of our rail yards and other terminal facilities. All of this minimizes variability, reduces time-consuming interchanges, and allows us to move traffic safely and efficiently from origin to destination.

We also devote tremendous effort and technology to make a complex network serve many types of customers with integrated, quality service. Union Pacific's transportation planning process furthers our basic network goals of producing fewer, larger trains, and fewer work events.¹ This allows us to move more rail cars further without stopping en route. It also makes the most productive use of our locomotives and crews, reduces car cycle time, and increases the total amount of freight we can move. By reducing stops en route and terminal switching, we reduce safety risks, costs, and delay.

¹ Work events include stopping to set out or pick up cars on a rail line or in a rail yard.

Union Pacific must plan its capital investments and its operations carefully. The investments we make to expand and enhance our network are very expensive, require a long lead time, and last for decades. Most track and terminal expansions require at least three years from concept to operation. We must design the project, gain community support, secure property for the project, obtain permits, relocate roads and utilities, and then construct.

Forced access and forced interchange would reroute traffic from the routes and facilities where we have invested billions, scattering them to less efficient routes and interchanges that are not suited for more traffic. The negative impacts could be devastating, particularly in terminal areas like Chicago and Houston, where big increases in interchange volume could cripple operations. The rail industry would move backward several decades to a time when most routes were open and all provided inferior service. The operations would also be less safe because traffic would be diverted away from “hardened” (upgraded with stronger and better components) infrastructure and established service patterns.

Forced access and interchange would also diminish our ability to plan future operations and make capital commitments. If we cannot control the routes over which traffic would flow on our network, the economic attractiveness of most investments would decline. We could not predict whether any particular investment would generate a reasonable rate of return, especially if we must allow competitors to use the investment at below-market prices. We would also have less revenue to invest, because our operating costs would rise, and revenues would fall.

My most immediate concern is that shipper-driven access and interchange decisions would bottleneck service and could melt down the network. Disregarding our network structure and transportation plans by shifting traffic to new interchange points or overcrowding terminals creates a risk of cascading failures. Yards that have been efficiently designed to place cars going to certain destinations on certain trains could become swamped if network destinations suddenly

change as individual customers demand new interchanges. A train that needs no intermediate switching today might require switching so certain cars can move to various shipper-selected interchanges. Forcing new access and changing interchange points would add work events to busy rail lines with heavy through train density, thus slowing down the overall network, and reducing throughput capacity. We know from experience in 1997-98 how quickly a network can break down when it becomes congested with traffic, and Union Pacific will not voluntarily repeat that experience. The Board, however, might cause the next service crisis if its prudent access policy is reversed.

In this statement, I will describe Union Pacific's record-high levels of safety and service. I will also explain why forced access and forced interchange would undermine our investments and operations, to the detriment of shippers, our employees, and the public. In Appendix A, I will describe some of our most significant investments and explain how these investments have allowed us to realize record safety and service. Finally, in Appendix B, I will describe the planned investments that we hope to make to maintain these high levels of safety and service as demand continues to increase.

II. BECAUSE OF A STABLE REGULATORY ENVIRONMENT AND YEARS OF INVESTMENT AND WORK, UNION PACIFIC HAS EMERGED IN RECENT YEARS AS A SAFER, MORE RELIABLE RAIL CARRIER.

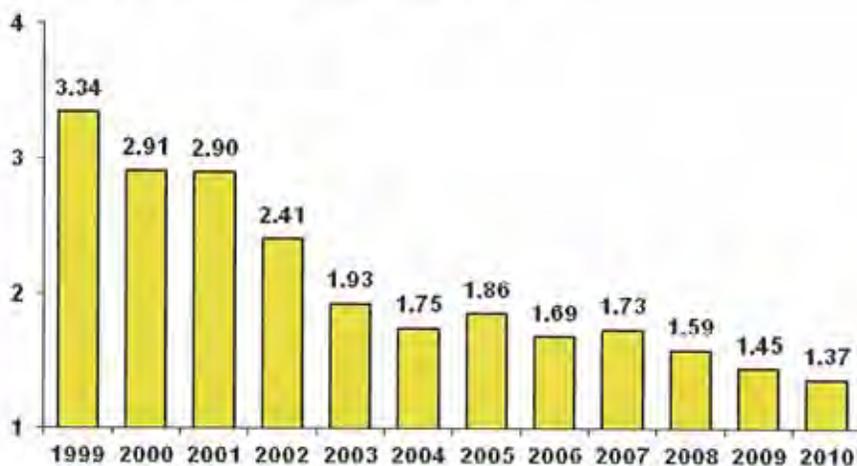
Our improving financial results are enabling Union Pacific to invest more heavily and to achieve major gains in safety and service.

A. Safety

With the support and engagement of our employees, Union Pacific's focus on safety allowed us to achieve our best-ever employee safety results in 2010. Our personal injury FRA reportable rate was 1.37 per 200,000 man hours in 2010, a 59 percent improvement over our

FRA reportable rate in 1999,² and a 6 percent improvement compared with our prior record in 2009.

Personal Injury FRA Reportable Rate (Figure 1)

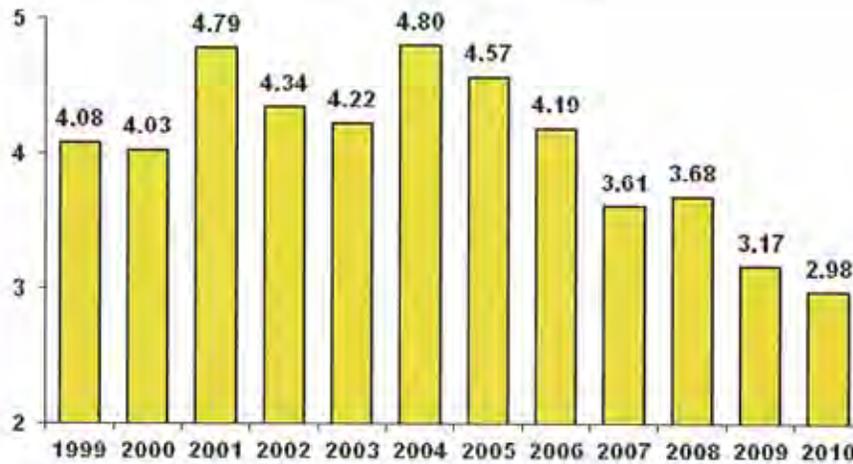


Our focus on safety also allowed us to achieve record results in what we call customer safety in 2010. Our rail equipment incident FRA reportable rate (a comprehensive definition that includes derailments and other incidents that interfere with reliable service) was 2.98 incidents

² We show various measures that compare to 1999, the first full year after Union Pacific had recovered from the service crisis that occurred after we acquired Southern Pacific.

per million train miles in 2010, a 27 percent improvement over our FRA reportable rate in 1999, and a 6 percent improvement over our prior record in 2009.

Rail Equipment Incident FRA Reportable Rate (Figure 2)



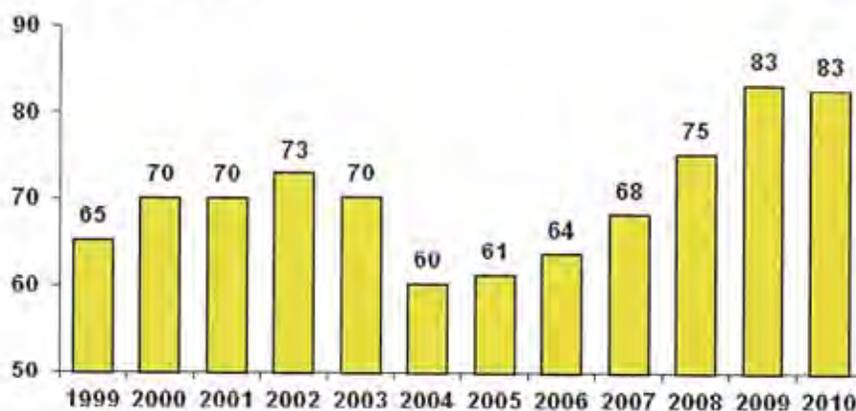
To increase safety, we have removed risks and created a safer environment through investments in infrastructure, technology, process improvement, and training. Our employees take personal responsibility for keeping each other safe. Our goal is continuous improvement toward eliminating safety incidents, which also yields better customer service.

B. Service

We are dedicated to providing valuable service to shippers and to never repeating our service failures of 1997-98 and 2003-05. In 2009, Union Pacific produced record service results, according to almost every metric that we track. Our challenge in 2010 was to move growing volumes of traffic while maintaining and further improving our performance. We achieved that goal. As traffic volume increased by 13 percent, from a recessionary low of 151,758 carloadings per week in 2009 to 171,764 carloadings per week in 2010, our key measures of service reliability and efficiency either essentially remained at record levels or improved. I illustrate this point below, showing various measures that compare 1999 to 2010. I also reference 2009 to demonstrate our ability to sustain and improve performance with increasing traffic that we handled from 2009's recessionary levels to the 2010 rebound in traffic.

Union Pacific's Service Delivery Index measures overall quality of service by whether cars arrive at their destination within established transit standards and schedules. (The higher the index, the better the service.) In 1999, the index stood at 65.³ In 2010, the index was at 83, an increase of 18 points, or 28 percent. (If we include cars delivered early, the index was 90 percent.) This tied our record of 83 from 2009, when traffic volumes were lower.

Service Delivery Index (Figure 3)

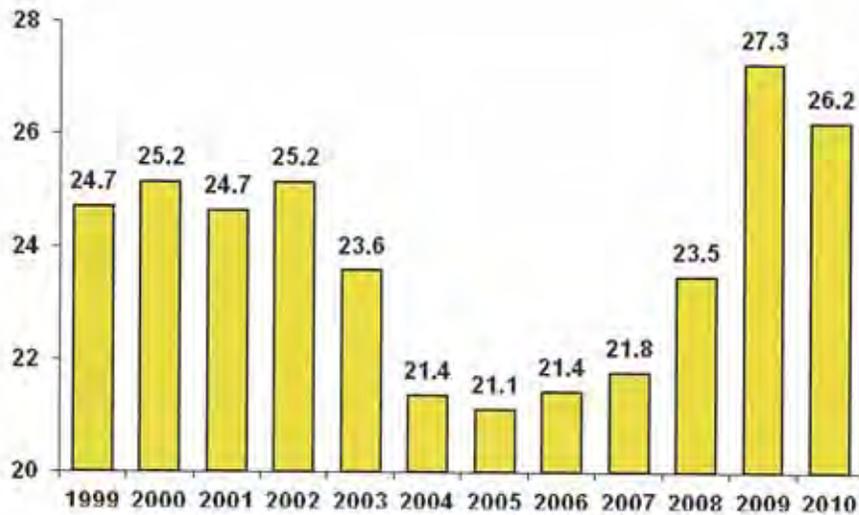


Union Pacific's average train velocity was 24.7 miles per hour in 1999. In 2010, our average train velocity was 26.2 miles per hour, an increase of 1.5 miles per hour, or 6 percent.

³ In 1999, Union Pacific averaged 167,104 carloadings per week, about 3% lower than our 2010 carloadings, which should address any concern that the service and safety improvements are simply the result of much lower traffic volumes on our network.

This put us only slightly below our record of 27.3 miles per hour in 2009.

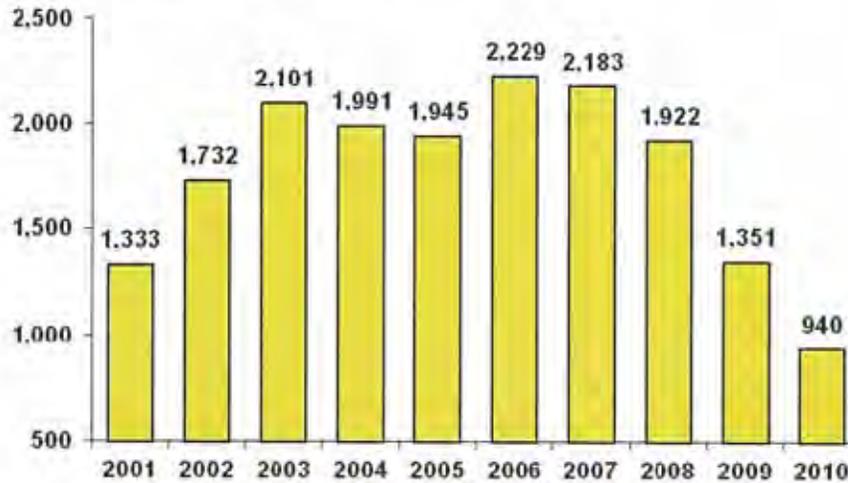
Velocity (Figure 4)



One reason our velocity remained high as traffic volumes increased is that we carefully planned to have all of the resources we would need to handle growth. We made sure that we had enough capacity, enough crews, enough locomotives, and enough cars in the right places and at the right time. We also made sure that our infrastructure had capacity and was ready. For

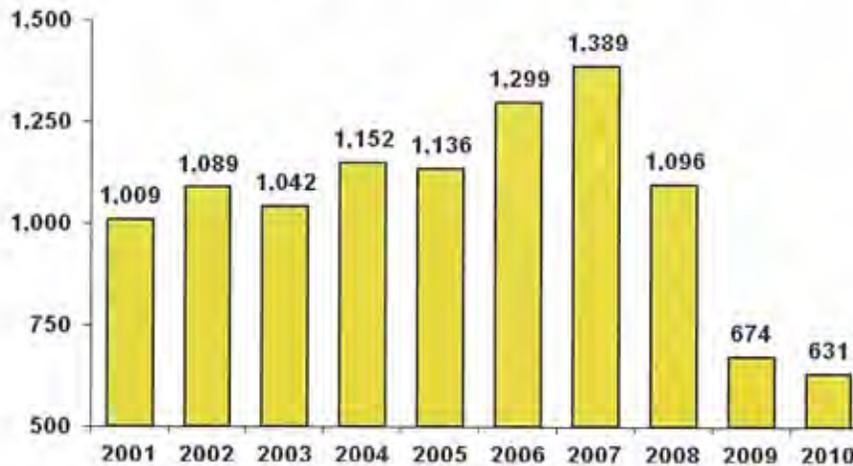
example, we had invested heavily to reduce slow orders. By the end of 2010, we had reduced slow orders⁴ to a record-low daily average of 940 miles of track.

Miles of Form A Slow Orders (Figure 5)



As a result, delays from slow orders dropped to a record-low 631 hours per day.

Slow Order Delay Hrs/Day (Figure 6)

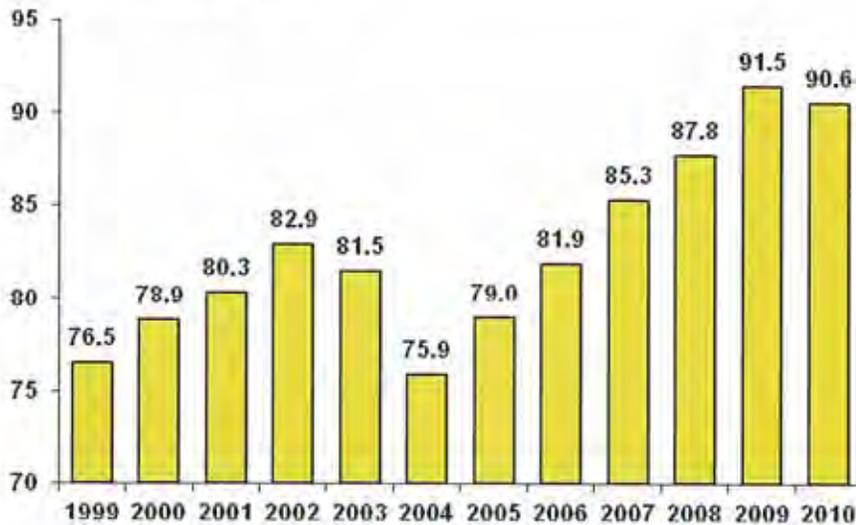


Union Pacific also continued to execute its transportation plan consistently, despite growing volumes. Our connection performance index, which measures whether cars meet the car scheduling plan at terminals, was at 76.5 in 1999. By 2010, we had improved connection

⁴ “Slow orders” are imposed when track conditions require us to reduce speed limits under FRA or Union Pacific standards. The slow order is lifted and track speed limits are increased after we perform maintenance to address the conditions triggering the slow order.

performance to 90.6, an increase of 14 points, or 18 percent. This put us just below our record of 91.5 in 2009, and well above the prior best-ever result of 87.8 in 2008.

Connection Performance (Figure 7)

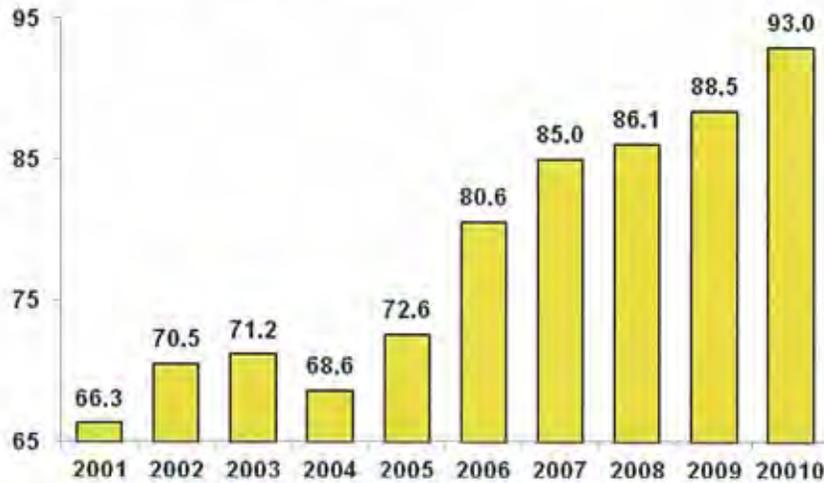


Another important measure of consistent execution is our industry-spot-and-pull average.

This measures an aspect of our performance that is one of the most visible to our customers: whether we arrive at their facilities and switch cars when we say we will. Our 2010 industry spot-and-pull average was a best-ever 93.0 percent, above our prior record of 88.5 percent in

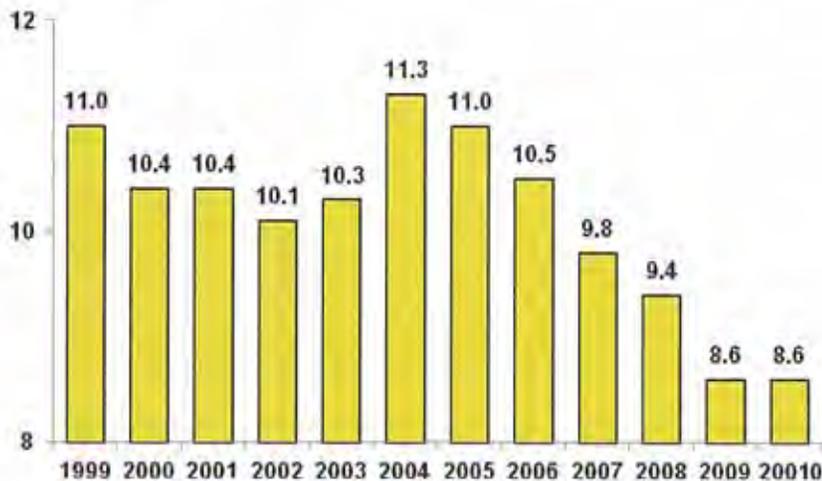
2009, and far above our score of 66.3 percent in 2001, the earliest year for which we have complete, consistent data.

Industry Spot and Pull Average (Figure 8)



Union Pacific also continued to increase efficiency. In 2010, we matched our best-ever freight car utilization of 8.6 days per cycle in 2009. Reducing cycle time – the number of days between loads – produces savings for both the railroad and our customers, because it means we and they need less equipment to transport the same volume of freight. By comparison, in 1999, our car utilization figure was 11.0 days per cycle.

Freight Car Utilization (Figure 9)

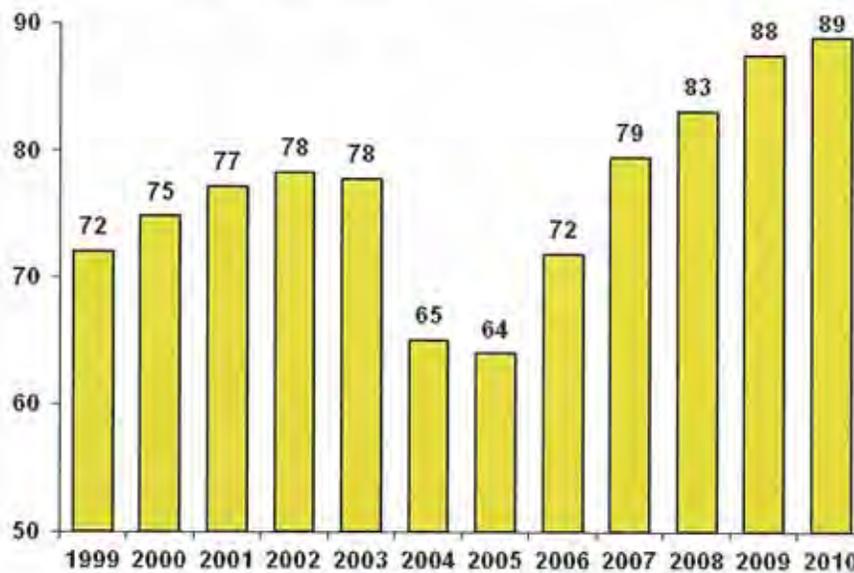


This improvement has been especially valuable for our chemical and plastics customers, who have been able to reduce their fleets of tank cars and covered hoppers.

C. Customer Value

Union Pacific’s customers have recognized our efforts to improve service and safety and the results we have achieved thus far. One of the best indicators of how customers view our service and its value to them is our overall Customer Satisfaction Index. That index averaged a record 89 in 2010.⁵ The 2010 result reflects a 17-point gain over the score of 72 that we received in 1999, and a one-point gain over our prior best-ever result in 2009.

Customer Satisfaction Index (Figure 10)

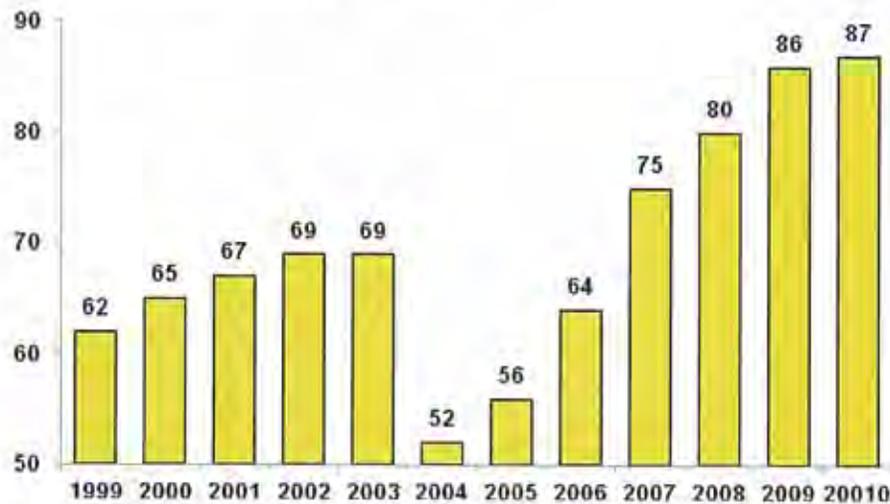


Union Pacific also specifically tracks and analyzes customer satisfaction with transportation service, though a series of questions regarding transit time and consistency, service with connecting lines, and adequacy of corrective action. The Transportation

⁵ A perfect 100 score would indicate that all customers participating in the survey were “Overall Very Satisfied.”

Satisfaction Index averaged a record 87 in 2010, which reflects a 25-point gain over the rating of 62 that we received in 1999, and a one-point gain over our prior best-ever result in 2009.

Transportation Satisfaction Index (Figure 11)



Another important indicator of how customers view the service and value we provide comes in the form of recognition by our customers. For example:

- We became the first railroad to earn the Eastman Chemical Company Supplier Excellence Award for overall company performance in 2009, and we earned the award again in 2010.
- General Motors honored us with its 2010 Supplier of the Year Award.
- Toyota Logistics Service recognized us as the top railroad in on-time performance and customer service in 2009, and we earned the customer service award again in 2010.
- Owens Corning named us as a Global Logistics Carrier Excellence award recipient for our service in 2009.
- Lowe's Home Improvement named us Rail Carrier of the Year for our service in 2009.

We are committed to continuing to provide high levels of service and value even as traffic volumes rise.

III. ASSUMING REGULATORY STABILITY AND ECONOMIC GROWTH, UNION PACIFIC EXPECTS TO INCREASE CAPITAL INVESTMENTS IN COMING YEARS TO MAINTAIN AND EXPAND SAFE, EFFICIENT, AND VALUABLE SERVICE.

Union Pacific has publicly told investors they can expect us to increase capital investment in line with revenue in coming years, unless the regulatory rules change. We want to make these investments to provide value to customers, to remain competitive, and to provide growth opportunities for our customers and investors. Many of those projects are underway. As Mr. Young explains in his verified statement, we already are raising capital investment from about \$2.5 billion in 2010's shaky economy to about \$3.2 billion in 2011. We have told investors to expect us to continue to plow 17 to 18 percent of our revenues back into the business in the form of capital investment for the next few years. As our revenues grow over that period, we expect our capital investments to grow proportionally, if the regulatory and economic environments remain supportive.

In Appendix B, I summarize some of the important investments that Union Pacific expects to make if the rules regulating railroads do not change substantially and traffic volume warrants.

IV. THE DANGERS OF FORCED ACCESS AND FORCED INTERCHANGE

Union Pacific has spent decades targeting investments and creating transportation plans to handle existing and anticipated shipper requirements. We have developed an integrated network of tracks and terminals and designed an operating plan so that we can move millions of carloads of traffic each year between thousands of origins and destinations and handle that traffic safely, reliably, and productively.

Forced access and forced interchange are fundamentally incompatible with reliable service and improving safety on our network. Shipper-dictated access and interchange decisions would disrupt operations on our lines and in terminals. They would force traffic over facilities

that were not designed to handle the business and reduce the productivity of the ones in which we have invested. The immediate result could be a service meltdown in major terminals. Even if we avoid short-term service failures, planning and allocating resources for the long term would become even more challenging than it already is. The unavoidable consequences would include higher costs, lower service quality, and less investment in our network. Union Pacific and its employees would suffer, but so would the shippers that seek forced access, as well as other shippers that are innocent bystanders.

In the sections below, I will describe operating plans that have resulted in safety, service, and efficiency and then explain why forced access and forced interchange would undermine network operations and decades of planning and capital investment.

A. Network Operational Efficiencies

Union Pacific manages a very complex network in which almost every decision affects the remainder of the system. Every day, we coordinate thousands of interrelated carload shipments so that they move reliably from origin to destination on trains and through intermediate switching yards, while also ensuring that intermodal and unit train traffic moves unimpeded from origin to destination. Changing the patterns of traffic flows on inadequate network was the root of the service crisis following the Southern Pacific merger. As we learned then, and as we saw again in the traffic surge in the middle of the last decade, problems on one part of the railroad network quickly spread to the rest of the network. In a carefully balanced network, we can reach a tipping point quickly.

We invest in our network to maximize traffic density and uninterrupted movement. In general, railroads can provide more efficient and better service when we have greater traffic density in a corridor. With more density, we can keep our locomotives in service more of the

time. We can schedule our train crews more effectively and efficiently. We can improve utilization of our track assets and spread the fixed costs of our network over more shipments.

More importantly, we can also move cars further distances without interruptions. We would much rather keep a car moving than switch it in a freight yard or at an interchange. Switching causes delay, often a day or more for each switch. It costs money for switch engines and yard crews. It reduces equipment utilization due to longer transit time. It increases the risk of damage to the freight. It reduces consistency and reliability. If we can get enough traffic density, we can build a through train to a more distant destination, whether on our railroad or others. Even if we do not have enough traffic for a full train, we can build a block of cars that will bypass an intermediate switch yard and avoid an additional switch. In other words, with enough volume, we can make our carload trains behave more like unit trains and move entire trains longer distances without breaking them up and switching the cars to new trains.

B. Examples Of Network Efficiencies Due To Control Of Routing and Train and Blocking Plans That Consolidate Traffic and Reduce Work Events

We build density and minimize switching through the investment decisions we have made over time and through our control of routing. As an illustration, Union Pacific generally tries to funnel as much Central Corridor carload traffic as possible onto our Nebraska mainlines and through Bailey Yard at North Platte, the world's largest freight yard. We have made massive investments to further this strategy and to increase capacity in our Central Corridor and at Bailey Yard.

For example, we usually route traffic from Kansas City to the West, including Denver via North Platte, even though we have a more direct route between Kansas City and Denver. By routing the traffic to North Platte, we can consolidate that traffic with shipments from Chicago, St. Louis, the Twin Cities, and many points from the South and East to build through trains and blocks for many points throughout the West, such as Los Angeles, Denver, Salt Lake City,

Northern California, and the Pacific Northwest. If we ran the Kansas City traffic straight to Denver, we would have to switch it in Denver, and there would not be enough traffic in Denver to make through trains or blocks to western destinations, so we would have to switch it again at Cheyenne or Salt Lake City. Using densities at North Platte, we can move shipments further and faster at lower cost, and we serve our customers more effectively.

Another way that we increase density and minimize switching is by directing traffic through the most effective interchanges. We can provide better, more efficient service by consolidating traffic into larger volumes over more suitable interchanges, allowing us to use run-through trains or blocks that run deep into our territory or the other railroad's territory. For example, Union Pacific has worked with Norfolk Southern to look at traffic moving between our systems. We jointly studied the interchange capabilities of gateways at Chicago, Kansas City, St. Louis, Salem (Illinois), Memphis, and New Orleans, and studied the services and service capabilities of our routes leading to each gateway. As a result of these joint efforts, Union Pacific began building a solid train at our Chicago Proviso Yard for NS's Pittsburgh yard. NS's Elkhart, Indiana, yard builds a solid train for our yard in North Platte, Nebraska. We assemble a block of cars in North Platte for NS at Sheffield, Alabama, via the Memphis gateway. NS builds a train for Houston at Sheffield. Union Pacific and NS comprehensively shifted traffic among gateways to keep it moving faster and to allow both railroads to build trains that can operate further without stopping. We have done the same with other railroads.

C. Forced Access and Forced Interchange Would Disrupt Efficient Routes and Transportation, Producing Poorer and More Costly Service

Forced access and forced interchange would destroy network efficiencies we built over decades. They would fragment traffic into smaller volumes that would require more switching. They would allow shippers to demand service changes without regard for impact on our network operations or on other shippers that depend on our service. Individual shippers would not have

any way to understand the complexities of our network design and efficiencies. Under a regime of forced access or forced interchange, our system-wide through-train and blocking plans would become less efficient, and our terminal performance would suffer as well.

Consider as an example is Union Pacific's carload service in the Sunset Corridor. To expedite customer shipments, avoid switching delays and congestion, and use facilities efficiently in this corridor, we eliminated work events on our busy mainline between the Los Angeles Basin and El Paso, and limited the amount of switching that occurs in the space-constrained El Paso terminal. To do this, we use major rail yards throughout Texas to assemble large blocks of cars going to specific areas on the Sunset Route. Shipper-controlled access would weaken or wreck this efficient service network.

We consolidate shipments from throughout the southeastern part of our system at Englewood Yard in Houston, Davidson Yard in Ft. Worth, and SoSan Yard in San Antonio. We then run trains direct to destination (and back) from Houston and Ft. Worth to the Los Angeles Basin, avoiding work events on the Sunset Route west of El Paso. All three yards also block Arizona traffic for Tucson, and these blocks move to El Paso, where they are combined without switching in El Paso into a train for Tucson that does no work en route.

This coordinated, network approach consolidates shipments so that they move as far as possible without delays. It avoids delays to dozens of other trains on our busy Sunset Route. Importantly, it also balances switching duties among our yards in Houston, Ft. Worth, San Antonio, El Paso, and Tucson, so that those yards can handle other planned traffic efficiently and without congestion. We minimize transit time for the largest number of customers possible.

All of these benefits would be at risk under forced access and forced interchange because we would lose control of how we route cars on our system. With no knowledge of network effects and impacts, and acting in their short-term interests, individual shippers could shift cars to

interchange points with BNSF and KCS that would add extra work at our yards and scatter the existing densities among multiple, fragmented routes. For example, shippers might divert traffic from efficient interchanges to our interchange with BNSF at Sweetwater, Texas, where trains would have to stop, blocking other trains on our busy line from Los Angeles to Dallas/Ft. Worth, Memphis, and other South Eastern markets. Neither we, nor other customers, can afford those delays. All of the interchanged cars would require additional switching at a terminal that is already space constrained.

Another possibility is that shippers might want to interchange cars at Deming, New Mexico, forcing trains to perform work events on the Sunset Route and adding to switching burdens at El Paso and Tucson. Or shippers might decide that they want cars to be interchanged in Phoenix, which is on Union Pacific and BNSF secondary lines and has limited room for switching and interchange. In 2004, Union Pacific's service almost came to a standstill in Phoenix when too many cars crowded into the terminal.

To take another example of the potential adverse impact on train performance and in terminals, Union Pacific gathers large volumes of chemical shipments from customers southeast of Houston on what we call the Bayport Loop. We have enough traffic from the Loop to launch a through-train from Bayport (Strang Yard) to Livonia Yard, our major switching yard near Baton Rouge, avoiding further switching – and congestion – in our Houston yards. At Livonia, Union Pacific makes trains and blocks that run deep into the NS and CSX systems for efficient service. We also run a train from Strang to the Alton & Southern Gateway Yard in East St. Louis. This train also avoids switching the cars in Houston and carries blocks for eastern connections.

Forced access and forced interchange put all of this in danger. For example, if shippers decide to interchange significant numbers of cars to BNSF at Houston, our efficient services

from Strang would collapse due to lack of volume, and BNSF and Union Pacific would face congestion in Houston. The congestion may be severe. We would have to send interchange cars to our Englewood Yard, where the additional cars would congest the yard. We would have to redesign our service plan to accommodate the cars that would still move via Union Pacific to interchanges with NS and CSX, which would add to our costs, and to the costs incurred by NS and CSX, as well as hurting service. The cars that would move via BNSF would need to be switched at Englewood into a BNSF connection block, delaying the cars by a day at Englewood. BNSF would then need to come get them, which would take additional time. BNSF would move the cars to its New South Yard, which appears to me to be near capacity already. After losing another day for switching at New South, the cars would eventually get out of town on a BNSF train for New Orleans.

Using Union Pacific's current services through Livonia and East St. Louis, which depend on the volumes we can assemble at Bayport, we can move cars east of the Mississippi River before the movements described above could get out of Houston. Some of those shipments are chlorine cars, which would spend two or three extra days in Houston, contrary to the strong public policy of minimizing the time hazardous materials dwell in high population areas. All affected shippers would lose quality service.

We would also face severe deterioration of service if shippers decided to redirect large amounts of the traffic that now moves efficiently through Livonia and instead interchange that traffic at Baton Rouge to KCS or Canadian National. Union Pacific's line from Livonia to Baton Rouge and our interchange facilities there are not built to handle significant volume. Cars would be delayed and the facilities would become congested. Even if we could accomplish the interchanges, our efficient blocking scheme for eastern movements from Livonia could be destroyed if volume were siphoned off through Baton Rouge.

Some forced interchanges would hurt service because our physical interchange facilities with other railroads, and the tracks leading to those interchange points, were not built to accommodate operations that shippers might demand in a forced access or forced interchange regime. For example, a shipper might decide to force Union Pacific and BNSF to interchange many more shipments at Tulsa, Oklahoma. Tulsa lies at the end of a Union Pacific branch line that begins near Muskogee, Oklahoma. The line from Muskogee to Tulsa is not suitable, in its current condition, for large volumes or for heavy traffic, such as unit coal trains, with bridges limited to 20 miles per hour. In Tulsa, we have only two tracks in the median of a major highway. Interchanges would require additional switching by BNSF at its Tulsa yard and by Union Pacific at Muskogee, causing congestion and delay. If BNSF and Union Pacific were forced to interchange coal traffic at Tulsa, Union Pacific would be expected to divert capital from more worthy projects to upgrade the Tulsa branch.

D. Increased Variability

Another issue is that customers could frequently switch access and interchange decisions, so that efficiency could not be achieved. We would not know with certainty where cars will move or be interchanged, in stark contrast to our current planning process, in which we change course gradually and deliberately with changes in markets. Predictability and consistency are critical to driving safety, service, and efficiency.

E. Forced Access and Forced Interchange Would Add Costs and Create Delay Across Union Pacific's Entire Network

On a broader scale, forced access and forced interchange would make our entire network less efficient because traffic would be diverted from the most efficient routes, reducing densities on those routes and thus unraveling the efficiencies that Union Pacific has built over decades. Cars would require additional handling, and thus we would need more terminal capacity, as well as more locomotives and crews to handle traffic in yards and on local trains that would be

needed to move the traffic to additional interchange locations. And even if the shippers that demand the new or different interchanges gain some short-term rate advantage for themselves, they will have done so at a steep cost to the many other shippers that benefit from our existing service, and ultimately to the very rail network that serves them.

Moreover, I believe it is unlikely that any shipper with single-line service that forced Union Pacific to interchange at new locations would obtain any service benefit. From an operating standpoint, there is no doubt that single-line service, where one railroad has the ability to manage service over its own routes, is almost always superior to interline service. Movements requiring an interchange between railroads are always subject to inefficiencies because they require the railroads to coordinate their operations. Even under the best of circumstances, when railroads have strong incentives to cooperate to provide service, the coordination challenges can be difficult or impossible to overcome because the railroads ultimately have different overall priorities for their systems.

At a more basic level, the physical process of interchanging cars between railroads creates delay and inefficiencies. Unless there is enough traffic going to the right place to justify run-through trains, one railroad must switch cars for the other and then deliver them. The other railroad then must switch them again. Transit time and equipment utilization suffer. Except where the railroads have enough volume to use run-through trains, one of the carriers must use its locomotives and crews to make the delivery, and both must typically switch the cars to take them to and from the interchange. In addition, recent rules have imposed costly additional requirements for interchanges of hazardous materials, including human handoff between carriers at interchange. All of these inefficiencies are avoided by single-line service.

Forcing railroads to grant trackage rights to shipper facilities would be particularly pernicious. It would raise operating costs by requiring two railroads to operate at facilities that

were never constructed for use by multiple carriers. This potentially doubles the use of limited infrastructure in the most constrained parts of our network. It may also result in additional switching, which could greatly reduce our ability to sort cars for our own network. Both railroads would incur added costs in attempting to coordinate their services, and, even with those efforts, interference and conflict are almost inevitable. Moreover, operational conflicts would likely affect not only the shipper that created the situation, but also any other shippers within the terminal area. Shippers usually do not like to interrupt their activities twice per day for dual service.

F. Forced Access and Forced Interchange Would Sacrifice Capital Investment Efficiencies

Forced access and forced interchange would also undermine our past and future capital investments. Forced access and forced interchange would require us to spend more to provide the same level of service, would strand investments that we previously made based on expectations that traffic flows would follow efficiency principles, not regulatory principles, and would make future investments more risky, and therefore less likely.

Forced access and forced interchange will result in inefficient service and higher costs. They could also leave Union Pacific with stranded or underutilized investments in rail lines and yard facilities. For example, as I note in Appendix A, Union Pacific invested \$145 million to transform Davis Yard in Roseville, California, into the premier switching facility (classification yard) on the West Coast and allow us to consolidate traffic previously handled by many smaller yards. Under a forced access or forced interchange regime, shippers could decide to interchange cars between Union Pacific and BNSF or shortlines throughout California, such as at Stockton, Sacramento, Fresno, Oakland, Warm Springs, and Bakersfield, which would undermine our investment in Davis Yard and increase the need for expensive switching and local train operations at other points.

As another example of the potential for stranded investment and worse service, Union Pacific has continually refined its service to soda ash shippers in southwestern Wyoming, site of the world's largest deposit of soda ash. We just opened a new \$23.9 million yard at Westvaco, Wyoming, to support this service. We assemble through trains that operate without delay or switching to Bailey Yard (North Platte, Nebraska), where the cars are distributed to our network of trains destined to points throughout the Midwest, South, and East. Shipper-directed interchange could destroy this efficient operation and impose new costs on Union Pacific. Shippers might decide to divert some of their shipments to interchanges with BNSF at Cheyenne, Denver, or Salt Lake City. This would break up the volume that allows us to operate the North Platte through-trains. It would require us to develop a less efficient, more expensive service to Salt Lake City, or Denver, or Cheyenne, where the interchanges are cumbersome and not suited to large volumes. The new service would be much slower, reducing utilization of shipper-owned and rail-owned equipment. For the entire service, this would be a leap backward and reduce use of our investments.

Finally, a regime that included forced access or forced interchange would make it even more difficult than it is today to engage in capacity planning or to fund capacity projects. We would have no assurance that, if we made an investment on any route, shippers would keep their traffic there. We cannot shift our investments as quickly as shippers could demand a new interchange. We cannot invest without some assurance of a reasonable return. Once our capital dollars are spent, most of them cannot be removed from the ground. We would also find it more difficult to determine whether to hire and train additional crews for particular locations. Even if shippers invoked forced access or forced interchange only rarely, the lack of predictability increases our risk and thus reduces our ability to invest.

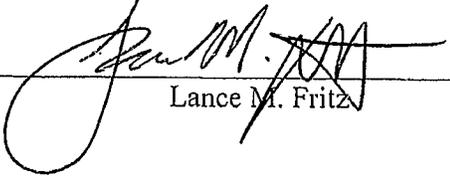
V. CONCLUSION

Union Pacific is providing safe, reliable, efficient service and value to customers, and we are investing to meet growing demand. Forced access and forced interchange would undermine the progress we have made by counteracting our efforts to maximize density and uninterrupted movement. At the same time, forced access and forced interchange would result in wasted spending and reduce our ability to make investments that will benefit the rail network. The Board should reject any proposals to implement such a counterproductive regime.

VERIFICATION

I, Lance M. Fritz, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this Verified Statement.

Executed on April 11, 2011.


Lance M. Fritz

APPENDIX A

APPENDIX A: CAPITAL INVESTMENT AND IMPROVEMENT

UNION PACIFIC'S ACHIEVEMENTS HAVE BEEN MADE POSSIBLE BY MASSIVE INVESTMENT IN OUR NETWORK.

Union Pacific's high levels of service and safety rest on a foundation of massive investments to expand and enhance our operations over the past 30 years. Through a series of transactions that culminated in our acquisition of Southern Pacific, Union Pacific has grown from a carrier operating 9,315 miles of railroad in 13 states to a complex network that operates more than 32,000 miles of railroad in 23 states. By combining traffic flows on the most efficient routes, and investing in those routes, the consolidated Union Pacific provides safer and better service than any of our individual railroads could have. Union Pacific spent billions of dollars to acquire other carriers, upgrade their facilities and equipment, and integrate their operations to create today's railroad.

Union Pacific has spent additional billions of dollars to remove bottlenecks from the network we created, to remove interruptions and variability from our service, and to harden our infrastructure. Today our network provides tremendous benefits to shippers by expanding our ability to provide single-line service, creating shorter routes, eliminating service-killing inefficiencies, and increasing capacity.

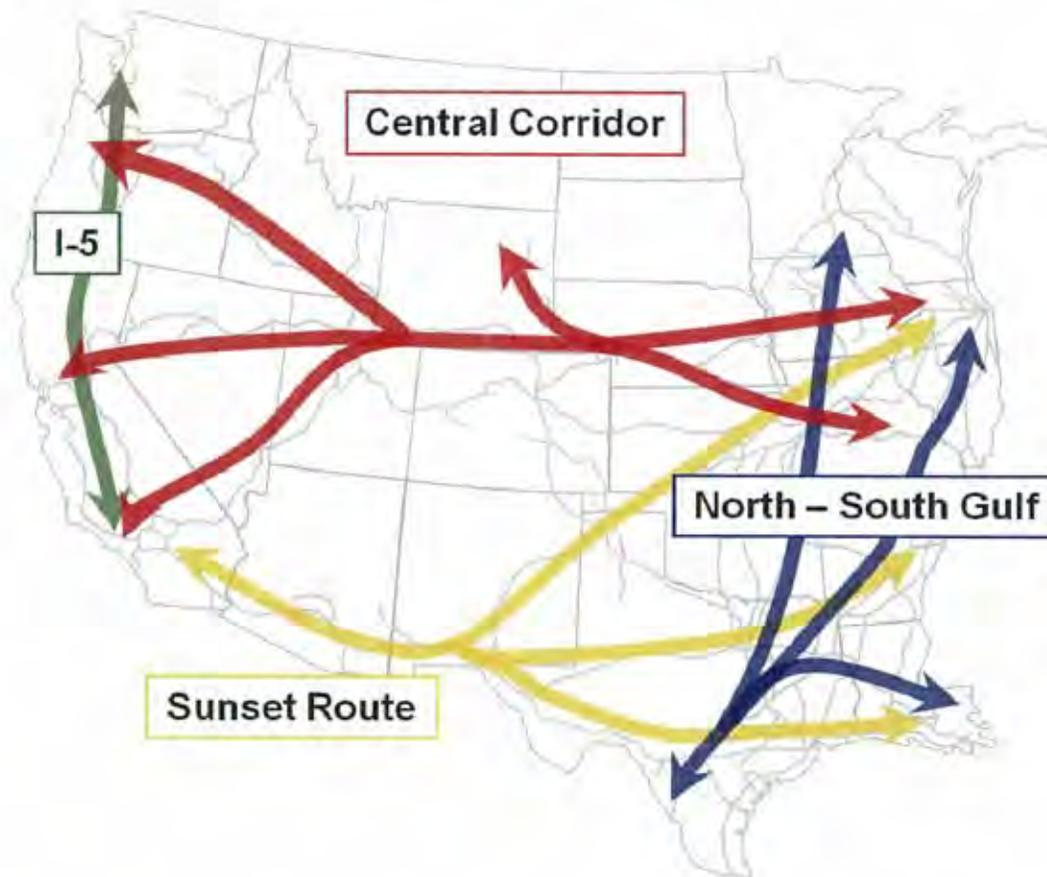
In the sections below, I provide examples of the investments we have made to improve safety, capacity and service. Our ability to maintain the gains we have achieved and to continue investing to address shipper demand for expanded and enhanced service is, however, threatened by the potential revenue and operational impacts of a regulatory regime that would include forced access and forced interchange.

A. Investments in New Track and Facilities

Particularly as our revenues have improved, we have been investing more in new track and terminal facilities. These investments are designed to promote the efficiency and reliability of our service to customers. They improve performance by keeping our mainlines and yards fluid as volumes increase, often by removing bottlenecks that cause delay and constrain growth.

We think about our investments by corridor. Although we shift trains between corridors for flexibility, we invest to ensure that our major corridors serve customers well. I will summarize some of our most significant investment in recent years in our four major corridors.

(Figure 1)



Central Corridor. Union Pacific's Central Corridor, which includes the original transcontinental railroad from Council Bluffs, Iowa, to Sacramento, California, extends from Chicago to Northern California, with extensions to the Los Angeles Basin and the Pacific Northwest.

In the Chicago area, Union Pacific has invested substantially, along with others, in the CREATE projects. CREATE involves most of the railroads serving Chicago, as well as regional, state, and federal agencies, in an ongoing series of projects that will improve passenger, freight, and vehicular movement through the congested Chicago area. We have already constructed a new rail line eastward from our major rail yard in Chicago, Proviso Yard. This important route allows trains to leave our Proviso Yard for eastern connections without conflicting with Metra commuter trains. Also, as part of CREATE, Union Pacific is constructing a new connection between our Proviso Yard and the Indiana Harbor Belt Railroad, which carries freight to and from other railroads in the Chicago area. That \$82 million project will allow more fluid interchange of large volumes of traffic through Chicago. The picture showing progress as

of the end of March is provided below and help show why these big projects require years of planning and preparation.

(Figure 2)



A major capacity enhancement in recent years added more than 290 miles of Centralized Traffic Control and universal crossovers between tracks at numerous locations on the double-tracked, former Chicago & North Western line across Iowa. (I will refer to the automated switches, signals and new crossovers as “CTC”.) CTC allows dispatchers in our train-control center to operate switches remotely, eliminating the need for employees to stop their trains, throw switches, and walk the length of the train after it passes. By adding CTC from Denison, Iowa, all the way to the Mississippi River at Clinton, Iowa, we gained the ability to allow faster trains to pass slower trains, increased the reliability of all trains on the route, and avoided significant delays when interruptions occur.

We also added a 2,550-foot, double-track bridge 190 feet above the Des Moines River. This \$48 million bridge allows two trains to cross the river at full speed, replacing the historic

Kate Shelley Bridge, which required trains to slow to 25 miles per hour and handled only one train at a time, causing significant delays. The picture below shows the old bridge on the left and the new concrete bridge on the right.

Kate Shelley Bridge – Boone, Iowa (Figure 3)



The largest capacity project on the Union Pacific system in recent years was a multi-year initiative to expand our coal-handling capability out of the Powder River Basin, costing almost a billion dollars over a decade. It included completing construction of 108 miles of third main line track between North Platte and Gibbon, Nebraska, in 1999; 106 miles of second main line track between Gibbon, Nebraska, and Marysville, Kansas, in 2000; 47 miles of second mainline track between South Morrill, Nebraska, and Shawnee Junction, Wyoming, and 66 miles of second mainline track between South Morrill and North Platte, Nebraska, in 2003. It also included purchasing and rebuilding a shortline railroad in northeast Kansas to create directional operations between Kansas City and Marysville. These investments allowed us to increase coal service

reliability, even as our volumes increased, and also provided capacity for grain, carload, intermodal, and automotive traffic that shares this high-density corridor.

Powder River Basin, Wyoming (Figure 4)



On the parallel “Kansas Pacific” route between Denver and Topeka, Kansas, Union Pacific invested over \$350 million to entirely rebuild the railroad and add segments of CTC. We also invested \$30 million in Denver to build a by-pass track and avoid having to back up trains in the busy Denver terminal. We use this route to move coal trains between Colorado mines and customers in the East, Midwest, and South. Some shipper groups argued when we acquired SP that Union Pacific would never invest to serve Colorado coal shippers, who are “captive.” They were wrong, as over one-third of a billion dollars proves.

We have continuously upgraded the world’s largest freight yard, our Bailey Yard at North Platte, Nebraska, so that it can now process more than 150 trains per day. These investments made sense because our control over routing decisions allows us to consolidate traffic in Bailey Yard and use the yard’s capacity to build trains that can move long distances

without the need for additional switching. We also recently added a third main line through the yard at a cost of over \$8 million, allowing trains running through North Platte to move through the terminal without interfering with other operations.

North Platte, Nebraska (Figure 5)



In western Wyoming, we recently completed a new rail yard to originate and terminate trains carrying soda ash. This helps our customers reach their markets efficiently and use their private equipment more effectively, reducing costs for both the customers and Union Pacific. We built this yard even though these customers, too, are “captive.”

In Salt Lake City, Union Pacific constructed and opened a \$90 million intermodal facility west of the city. We also participated in a public-private partnership to modify a notorious bottleneck in Salt Lake City at Grant Tower, increasing train speeds through Salt Lake City from 10 miles per hour to 40 miles per hour. On our line from Salt Lake City toward Los Angeles, we

lengthened several sidings so that we can operate longer trains, as we are doing on our line to the Pacific Northwest.

In northern California, we recently improved clearances in tunnels on our Donner Pass line to allow full-size double-stack intermodal trains to operate on this most direct transcontinental line. This project allowed us to reroute numerous trains per day from a 70-mile-longer route through the Feather River Canyon. The Feather River Route deserves additional mention. Twenty or thirty years ago, Union Pacific would not have been able to afford to maintain this second rail route through the Sierra Nevada, as it recently has handled only about two trains per day each way. With higher revenues, we not only retained the Feather River Route, but also invested millions of dollars last year to upgrade it and remove slow orders. When the heaviest snows in 120 years hit Donner Summit last month – 15 feet in 10 days –

Union Pacific was able to reroute almost 20 trains per day via the Feather River Route, avoiding significant delays for large numbers of shippers. That is the service value of investment.

Donner Pass (Figure 6)



At the western end of the Central Corridor, Union Pacific in 1999 opened the J.R. Davis Yard in Roseville, California, after a \$145 million reconstruction project that transformed the yard into the premier classification yard on the West Coast. The new yard greatly increased efficiency by allowing us to consolidate traffic previously handled by many smaller yards and

build longer, dedicated trains that can move more directly to final destination or interchange with fewer time-consuming intermediate stops.

Davis Yard – Roseville, California (Figure 7)



South of Stockton, California, we constructed the Lathrop intermodal facility, serving domestic shippers throughout the region.

Sunset Corridor. Union Pacific's Sunset Route connects the Los Angeles area with El Paso. The Sunset Route has the lowest, flattest crossing of the Continental Divide in the United States. This is the most direct route to major Gulf and Southeast markets, which are projected to continue growing. We include in this corridor not only the former SP line from El Paso east to San Antonio, Houston, and New Orleans, but also the former Texas & Pacific line from El Paso

to Dallas/Ft. Worth and Memphis, and the Shreveport Gateway, as well as the former SP-Rock Island line from El Paso to Kansas City and Chicago.

Sunset Route (Figure 8)



Union Pacific's progress in double-tracking the Sunset Route provides another major example of investment to expand capacity and improve efficiency. When Union Pacific acquired Southern Pacific, the line from Los Angeles to El Paso was mostly a single-track line that had difficulty accommodating Southern Pacific's volumes. Lacking revenue to invest, Southern Pacific cannibalized its Central Corridor route by shifting rail from Nevada to the Sunset Route. With growing revenue, Union Pacific added a second track from Tucson to El Paso and on mountain grades east of Los Angeles. As of the end of 2010, approximately 61 percent of the line is double-tracked. The added capacity has been essential to our ability to improve service for the vast quantity of intermodal, automotive, agricultural, and carload shipments that use the line, which now carries about 20 percent of all Union Pacific traffic. At the west end of the

corridor, Union Pacific rebuilt Southern Pacific's major West Colton terminal, which serves carload customers throughout Southern California. We also added through tracks on our mainline, bypassing the yard, as well as more tracks in the yard, and a modern diesel locomotive shop.

On the eastern extensions of the Sunset Corridor, Union Pacific has invested in new intermodal terminals. The \$100 million San Antonio facility not only serves customers in that area, but also traffic to and from Mexico. In Dallas, Union Pacific created the Dallas Intermodal Terminal, investing another \$100 million and sparking rapid industrial development southeast of Dallas. Near Memphis, we constructed a new intermodal terminal at Marion, Arkansas. In the Chicago area, we recently opened the \$370 million Joliet Intermodal Terminal, which is already a major terminal for shipments to and from the West Coast. This important facility allows us to

meet customer demand for service from the Los Angeles-area ports to the highest concentration of distribution centers in the Midwest.

Joliet Intermodal Terminal (Figure 9)



Union Pacific also invested heavily in the former Texas & Pacific mainline between El Paso and Ft. Worth. This line carried as few as two trains per day on its West end two decades ago. It now carries 18-23 trains daily. Union Pacific rebuilt the railroad from the foundation up, increasing train speeds, and we built a number of new sidings and extended others to increase the number and length of trains the route can handle.

We have invested in many improvements in terminals and along mainlines in Texas and Louisiana. We improved Houston freight yards that struggled after Union Pacific acquired Southern Pacific. We installed connections and additional tracks to smooth the flow of traffic through that busy terminal. We added passing tracks and extended sidings to remove bottlenecks throughout Texas and beyond.

North-South Corridor. Union Pacific groups several routes into its North-South or Heartland Corridor. Moving from south to north, Union Pacific in recent years has had the funds to rebuild the “OKT” line from Ft. Worth to Wichita and beyond, using new rail and ties. We also added or extended sidings and double-track at numerous locations between Ft. Worth and Kansas City on other north-south routes.

Kansas City is the spoke of the wheel for Union Pacific lines in all directions, as well as a major interchange point. To handle over 100 trains per day, growing toward 150, we invested heavily to increase network efficiency. For example, we rebuilt Southern Pacific’s Armourdale Yard into an efficient facility for automobile, coal and other run-through trains. We participated, as a member of the Kansas City Terminal Railway, in a public-private partnership to lift the KCT mainline over busy Rock Creek Junction in northeast Kansas City, and we streamlined the tracks through Rock Creek. We also shared in funding an expensive third main track along the BNSF mainline for about nine miles east of Rock Creek to give Union Pacific a clear route to our River Subdivision toward St. Louis that branches off of the BNSF line.

On our north-south corridor from Texas through Arkansas to St. Louis and Chicago, directional operation between Texas and Southern Missouri and Memphis gives us a substantial amount of capacity, although high-priority Amtrak trains moving against the directional flow are a daily challenge. We virtually rebuilt the former Southern Pacific (St. Louis Southwestern)

lines for primarily southbound operation from Missouri through Pine Bluff, Arkansas, all the way to Texas.

Principal Directional Flows (Figure 10)



We added signals for increased safety on the Shreveport-Houston segment because it carries Toxic Inhalation Hazard shipments. In southern Illinois, we added capacity on several line

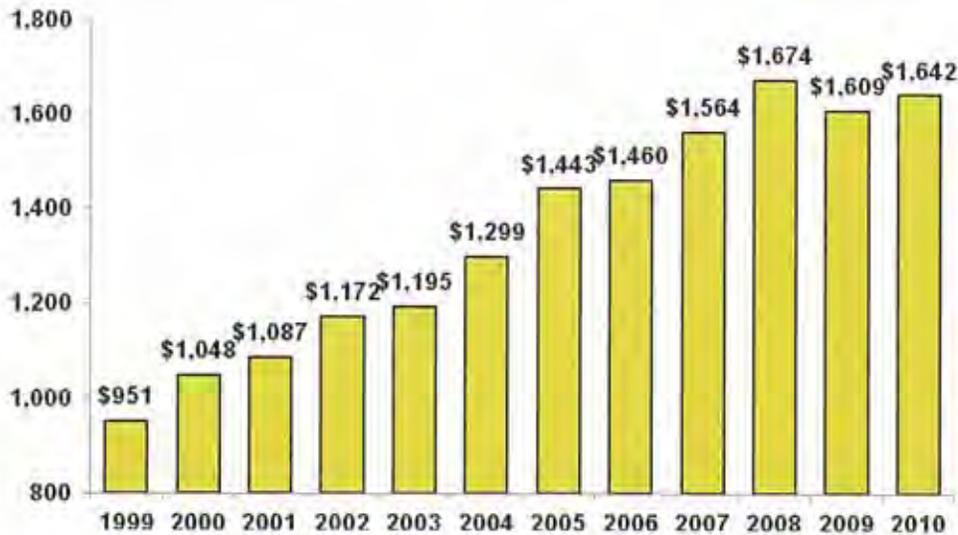
segments that carry Illinois coal or that connect our former Chicago & Eastern Illinois line from Chicago with our routes to Texas.

Growing revenues made all of these investments possible, and all are contributing to network service improvement and capacity growth.

B. Investment to Renew and Replace Existing Track and Facilities

As much as Union Pacific has invested to increase capacity and improve service by adding new track and facilities, we have invested even more to enhance service by improving and hardening our track and roadbed infrastructure. Since 1999, our annual investments have grown as we have replaced millions of ties and hundreds of track miles of rail across our network every year. We maintained this high level of investment even during the recession.

Replacement Capital Investment (millions) (Figure 11)



Our consistently high level of spending on replacement capital has been critical to our ability to provide fluid and safe operations and increase network efficiency in several respects.

First, our replacement capital spending has allowed us to reduce substantially the number of slow order miles across our system. As I observed earlier, by the end of 2010, we had reduced Form A slow orders on our network to a record-low daily average of 940 miles. This translates into a reduction in the hours of delay caused by track defects, which were also at a record-low of just 631 hours per day in 2010. Reductions in slow order delay protect velocity and consistency, which in turn means better service and improved asset utilization.

Second, replacement capital spending substantially reduced the number and impact of service disruptions caused by track and signal failures.

Third, when we replace aging assets, we often replace them with higher quality assets. These efforts to “harden” the railroad play an important role in furthering our goal of increasing reliability and safety. On all heavy-traffic corridors, we now install head-hardened, premium rail. With more premium rail and other actions, we have extended rail life from 2 to 3 billion gross tons. That means fewer interruptions to replace rail. In addition, when we replace ties, we are often installing concrete ties, which are more durable, and therefore require less frequent

replacement, than wooden ties. The before and after pictures below illustrate use of stronger rail and concrete ties to hold proper gage on this curved route.

Moffat Tunnel Subdivision (Figure 12)

(Before)

(After)



Similarly, when we replace aging bridges on our system, we typically use materials that are more durable than those used in the original construction. We replace timber with steel and concrete. We also build the new bridges to accommodate expected growth in freight volumes. Union Pacific has over 400 miles of bridges, so bridge replacements are an expensive proposition, but they are the type of major investment in infrastructure we can now make so that we provide more reliable, efficient service.

Concrete Bridge – Sacramento, California (Figure 13)



As a result of these investments in replacement capital, Union Pacific is a much more robust railroad than its components were at the time of the Union Pacific-Chicago & North Western and Union Pacific-Southern Pacific mergers. That lets us provide better service.

C. Investment in Locomotives and Freight Cars

Union Pacific has also used improved revenues to acquire new locomotives and freight cars. Since 1999, we have invested more than \$6.7 billion to replace older equipment at the end of its useful life and position the company to handle growing customer volumes. For example, we have acquired, on average, 279 new road locomotives for our fleet each year since 1999. Our new locomotives are more fuel efficient and produce fewer emissions than older locomotive units. Over 75% percent of our locomotives are certified under existing EPA emission standards.

D. Investment in Technology

As our revenues have grown, investments in technology have played a critical role in improving our service and increasing our effective capacity. In our quest to improve service, Union Pacific is investing in technology that reduces interruptions to the flow of trains and, as a result, makes our service faster and more reliable.

Harriman Dispatch Center (HDC) (Figure 14)



Many of the actions we are taking deal with problems that have affected the industry for more than a century, but were treated as unavoidable aspects of operating a railroad. Union Pacific risks unplanned interruptions – a locomotive failure, a train splitting apart, a false reading on a wayside defect detector, and many other events. Every one of these interruptions potentially stops one or more freight trains, usually delays other trains, causes crews to be on the road longer than planned, and disrupts the reliability of our customer service. Here are several examples of what we are doing about this situation.

Locomotive health diagnostics. Modern diesel locomotives contain sophisticated, computerized monitoring systems that transmit numerous reports on non-standard operating conditions. Union Pacific has developed a unique system that accumulates and analyzes the reports on each locomotive as it operates throughout the system. When the locomotive reaches a repair or servicing facility, our system tells mechanical forces exactly what needs to be looked at and precisely how to repair it, saving time in the shop. As a result of this system, we improved the mean time between locomotive failures on our premium trains by 20 percent in one year.

Reducing derailments caused by defects. Over the last decade, Union Pacific has installed a battery of technological innovations to catch defects before they become derailments. In 2002, we and other railroads began installing “WILD” wheel-impact detectors. These detectors identify individual wheels that have imperfections and produce unusual impacts on the rail. The WILD detectors are linked by communications and computer systems, so that we can

monitor the evolution of each individual wheel. As a wheel approaches a point where it could cause a derailment or damage rail, we proactively fix it.

Wheel Impact Load Detector (WILD) (Figure 15)



In 2004, we also installed acoustic sensing devices that “hear” signs of a wheel bearing failure before it can cause a derailment.

At North Platte, we created a one-of-a-kind, automated facility to perform ultrasonic testing of individual wheels to look for defects that visual inspection cannot find. Using this system, we have located 93 defective wheels, each of which would likely have derailed a train. An entire train can operate through the testing system at 5 miles per hour and then proceed toward its destination. We have “scrubbed” the coal-train fleet on Union Pacific and are now moving on to other types of unit trains. Union Pacific has not suffered a shattered wheel-caused coal train derailment in two years, a major improvement. This is an example of our ability to

innovate because of the size and strength of the railroad. It is unlikely that one of our smaller predecessor railroads could have dedicated resources to this kind of innovation.

Ultrasonic Wheel Defect Detector (Figure 16)



Reducing derailments caused by equipment is only part of our campaign. We also have deployed state-of-the-art technology to identify defects in rail that can cause derailments or delays due to broken rails. Our suppliers perform tests on all new rail, but defects can nevertheless slip by, and they are not visible. Union Pacific has deployed sophisticated rail detector cars that use ultrasonic and induction technology to look inside rails for hidden defects. These cars can operate at speeds from 10-15 miles per hour.

depending on the technology used, so we can inspect big segments of the railroad quickly and repeatedly.

EC-5 Track Evaluation Car (Figure 17)



A related area in which investment in technology is helping to maintain network fluidity is our investment in the most modern, efficient track maintenance equipment. For example, our TRT 909 track renewal train installs new rails and concrete ties in one pass, and can install up to 6,000 ties plus new rail in a ten-hour day. Moreover, by using this equipment we can

undertake the extensive renewal projects that are necessary to maintain and upgrade our service while minimizing disruption to traffic that must continue to move over our network.

Track Renewal Train (Figure 18)



Another area in which technology has played a critical role in improving service has been the development of advanced information systems, such as our Customer Inventory Management System, or “CIMS.” We developed CIMS to help proactively manage terminal inventory, in order to maintain terminal fluidity and increase asset utilization. CIMS monitors customer railcar inventory and storage capacity, freight cars en route on Union Pacific, and freight cars awaiting final delivery to customers. It allows us to help customers manage traffic flows and avoid delays. It therefore helps reduce terminal inventory and dwell time and improve switching performance. If cars arrive using reciprocal switching or terminal trackage rights, we would lose the ability to adjust the flow into terminals to protect fluidity.

Still another significant example of technology investment is expanding the number of locomotives that are equipped to operate using distributed power. Use of distributed power – placing additional locomotives at intermediate points in, or on the end of, a train and controlling them from the lead locomotive – lets us operate fewer, longer trains to deliver the same amount

of freight. In addition, distributed power reduces failure rates because distributing the motive power throughout the train reduces forces that can cause damage to draw bars and shipments. We also save fuel and improve rail life because distributing the motive power reduces friction between wheels and rail on curves. We used distributed power to move 62 percent of our gross ton miles in 2010, up from 26 percent of gross ton miles in 2007. If shippers could dictate the interchanges that we use, thus fracturing our traffic across a wide variety of routings, we would need to operate more, smaller trains, and the efficiencies we have gained by using distributed power to create longer carload trains would be lost.

E. Transportation Planning

Union Pacific's transportation plan, which is our "playbook" for train operations is called the "Unified Plan," and it is a living playbook. The Unified Plan reflects an ongoing effort that we began in the second half of 2004, when we took a "clean sheet" approach to designing plans for all types of train service. Using this process, we have since 2005 removed 39 percent of work events and reduced the number of switch events by 21 percent. Because capital planning requires starting three years before an investment is needed, we cannot respond to frequent and unplanned shifts in routing. Our planning process will be far less effective and produce poorer service if shippers can introduce work events and switch cars to less efficient routes and interchanges.

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

Docket No. EP 711

**PETITION FOR RULEMAKING TO ADOPT REVISED
COMPETITIVE SWITCHING RULES**

**OPENING COMMENTS AND EVIDENCE
OF UNION PACIFIC RAILROAD COMPANY**

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March 1, 2013

Contains color images

The ICC and the Board approved and enthusiastically endorsed consolidating the U.S. rail system to provide increased single-line service and eliminate interchanges, including interchanges in terminal areas. NITL's proposal asks the Board to go back in history and discard that structure in favor of broadly-available reciprocal switching that would require new patterns of operation. Having embraced and applied a public policy favoring single-line service—which America's railroads delivered to the public's benefit at enormous cost—the Board should not return to the unsuccessful and inefficient type of rail structure from the pre-1980 period by displacing single-line service with interchange service.

III. THE NEGATIVE IMPACTS OF NITL'S PROPOSAL ON RAIL NETWORK EFFICIENCY AND SERVICE TO CUSTOMERS WOULD BE SUBSTANTIAL.

NITL's proposal would not only reverse the Board's competition policies on which railroads relied in structuring their networks, it would also have the immediate and practical effect of severely disrupting UP's operations and transportation plans if shippers used forced reciprocal switching for a significant volume of traffic. In section A, we describe generally the likely impacts of increased forced switching on railroad operations. In section B, we illustrate those impacts by describing the potential impacts on UP operations in Houston, Kansas City, and Sioux City. In section C, we discuss a particular challenge associated with reciprocal switching that would become an even larger problem if NITL's proposal were adopted: the receiving railroad's inability to monitor and control inbound traffic flows to shipper facilities.

A. Forced Reciprocal Switching Would Disrupt Yard Operations and Transportation Planning.

Under NITL's proposal, every car that is subject to forced reciprocal switching would require extra yard switching, which typically means 24 to 48 hours of delay for each affected car movement between railroads. Thus, from the time the empty cars arrive in a terminal until the

loaded cars depart, even in relatively uncomplicated interchange situations, where two railroads are operating in the same terminal and delivering cars directly into each other's yards, reciprocal switching would add 48 to 96 extra hours during which the affected cars would remain in yards, increasing car inventory and consuming capacity.¹⁹ These estimates are conservative. They assume both railroads are operating under fluid conditions. Often the delays would be longer. Every car subject to reciprocal switching must traverse the terminal area twice as it moves from one railroad's yard to the other railroad's yard, once when it is empty and again after it is loaded, and these movements cannot occur until the receiving railroad has the capacity in its yard to accept the cars being transferred. Difficulties in coordinating interchange between two railroads can also lead to additional delay—delay that crops up every day on the U.S. rail system when cars are interchanged between railroads. As discussed above, eliminating those delays is one of the benefits of single-line service. NITL's proposal promises slower, less efficient service for every shipper that uses forced switching.

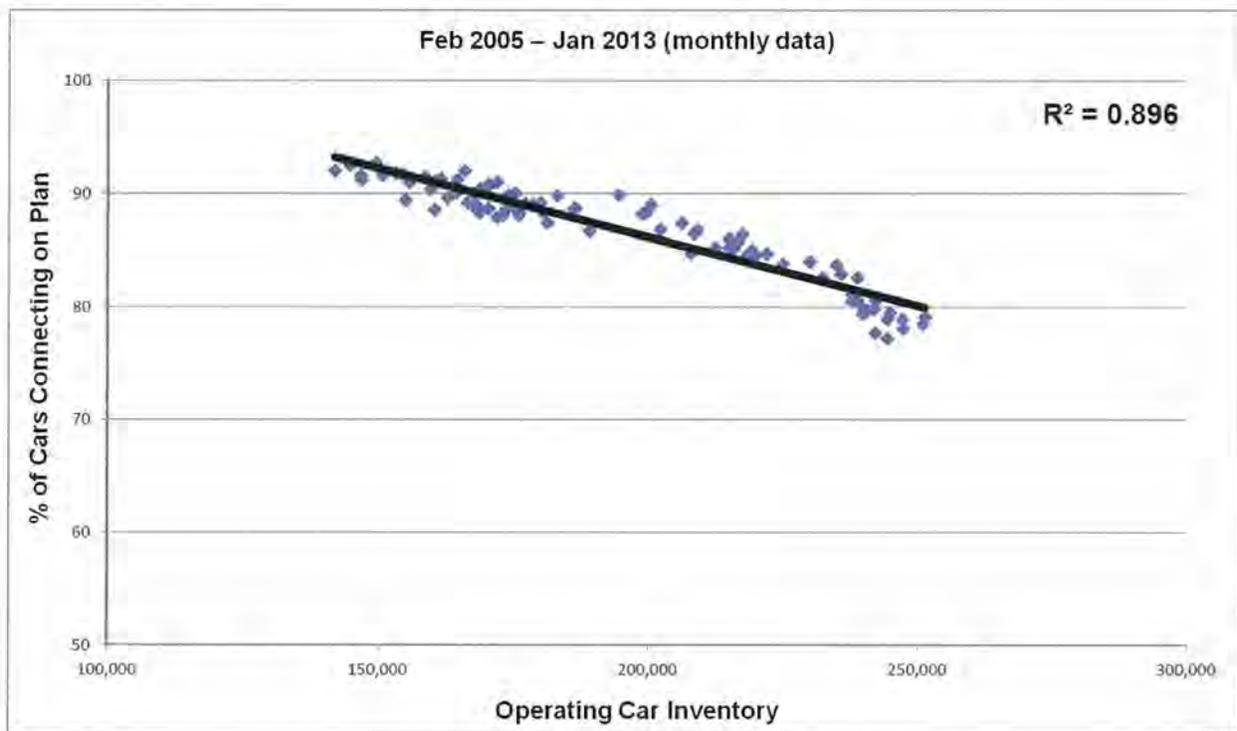
Moreover, the impact of NITL's proposal would not be confined to shippers that use forced switching. Even where two railroads already switch cars in a terminal, the extra time that the additional cars requiring switching would remain in yards would increase car inventory and consume capacity needed to serve other customers efficiently. As discussed above, as railroads have invested in their networks and developed transportation plans to eliminate intermediate switching, they reduced yard capacity that they had used for switching. In addition, because car cycle times would increase, shippers that use forced switching would need more cars to move the same volume of traffic, which would add even more cars to the network. As car inventory

¹⁹ The same would be true if the forced switching occurred at destination. UP's comments generally apply to railroads at either origin or destination.

increases, network velocity slows, degrading service to other shippers, who would also need more cars, further fueling a vicious cycle that can gridlock busy yards, disrupt the operating plan, and spread congestion across the network.

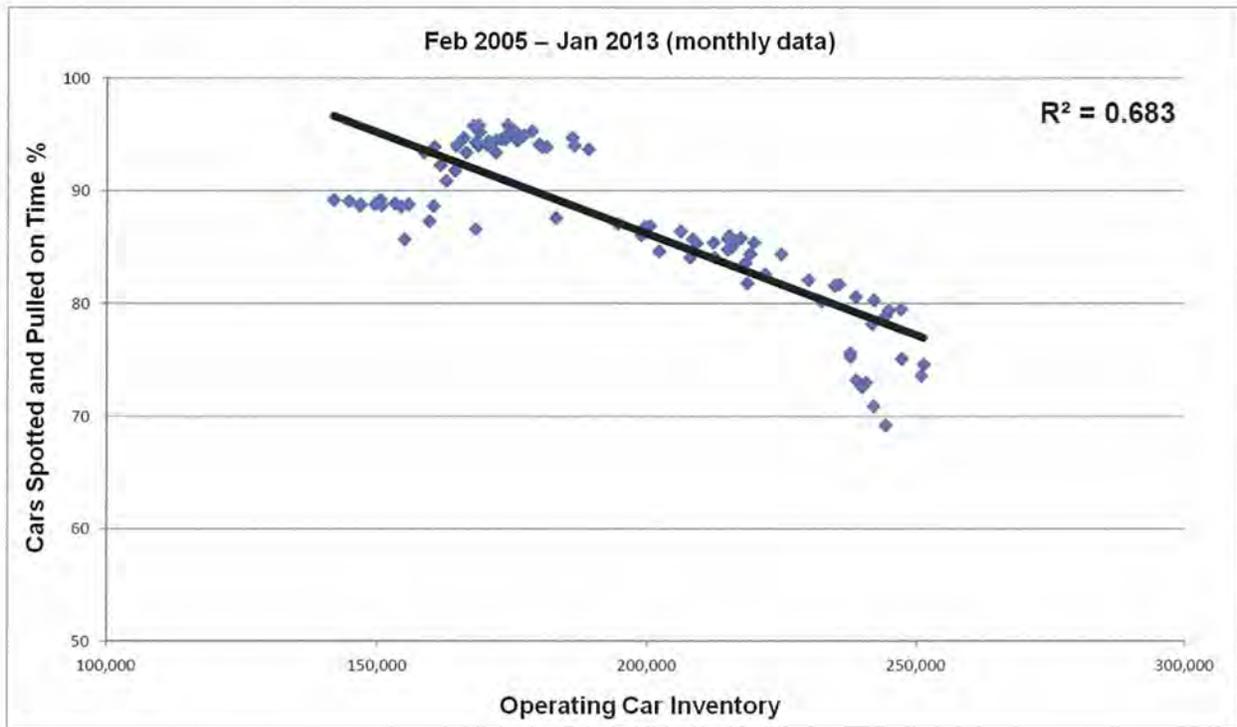
UP has studied the effects of car inventory—that is, the number of cars on its rail lines and in its yards—on operations, and the relationship is clear. As shown in the graph below, car inventory directly impacts UP’s ability to meet a car’s trip plan at terminals—that is, UP’s ability to get cars on their scheduled trains to deliver the cars to our customers. As inventory rises, on-plan performance falls, as shown in Figure 5.

Figure 5: Car Inventory Effect on Terminal Connection Performance



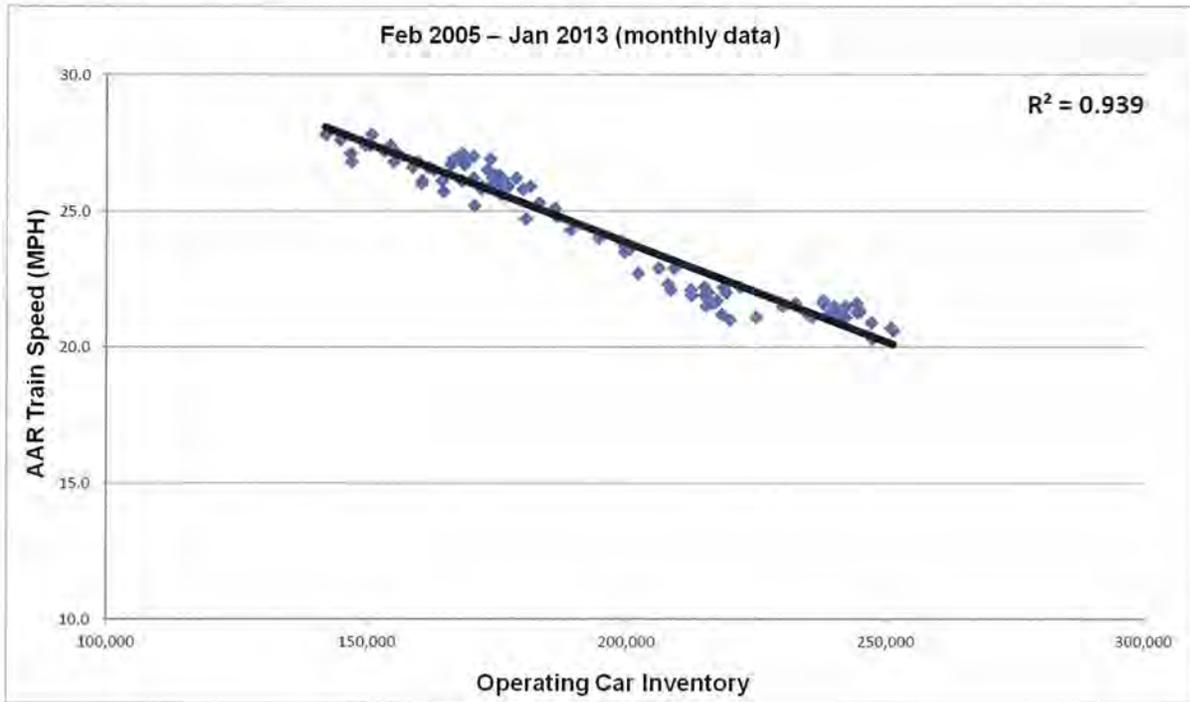
Car inventory also has a direct effect on UP’s industry spot and pull performance. UP measures an aspect of our performance that is most visible to our customers: whether we deliver and pull cars at the customers’ facilities when we say we will. Not surprisingly, as car inventory rises, industry spot and pull performance falls, as shown in Figure 6.

Figure 6: Car Inventory Effect on Service Performance at Industry



Car inventory also directly impacts train speed. As car inventory rises, train speed falls, as shown in Figure 7.

Figure 7: Car Inventory Effect on Train Speed



Decreases in train speed are extremely costly to the network and shippers that depend on rail service. UP has determined that a one mile-per-hour loss of velocity translates into the consumption of 200-250 additional locomotives, 5,000 additional freight cars, and 110-220 additional train, engine, and yard employees.

The impact of NITL's proposal on busy terminals where railroads already interchange traffic is a particular concern because forced switching could disrupt already complex operations and overwhelm existing infrastructure. As the volume of traffic that must be transferred between railroads rises, the movement of this traffic would interfere with the movements of other trains through the terminal. Cars that had moved from a shipper's facility to a yard where they were placed on a through train would instead be hauled from one railroad's yard to another railroad's yard. In fact, some cars would have to move from yard to yard on the same railroad before being

interchanged with the other railroad, creating additional, unnecessary movements through terminals and unnecessary congestion in yards that were not designed to handle those cars.

Shippers that use forced reciprocal switching would also degrade service to other shippers because they would be diverting traffic that UP uses to build through trains to more distant destinations and blocks of cars that bypass intermediate switching yards. They would fragment traffic into smaller volumes that require more switching. If shippers were to use forced switching for a significant volume of traffic, UP would need to run more trains with fewer cars and stop its trains more often for intermediate switching. This would represent an unraveling of the efficiencies that UP has worked hard to build, undermining reliable operations and creating additional delay for affected cars and additional costs for customers. UP would also need to restructure yard operations to accommodate additional intermediate switching. As discussed above, this would be difficult and costly because UP eliminated or repurposed many yard facilities as it reduced the need for intermediate switching.

Of course, if yards were to become congested and operations become gridlocked because customers invoked forced switching, UP would adjust its operations in an attempt to restore fluidity, as we have adjusted to changing traffic patterns and resulting congestion before. However, in the case of forced switching, UP would be left operating less efficiently as a result of regulation, not changes in market conditions. Moreover, UP would be continually vulnerable to network disruptions as shippers in different locations invoked regulatory intervention to gain advantage in rate negotiations. In addition, the resources that we use to respond to surges in traffic caused by changes in market conditions or to disruptions caused by weather events or incidents would be consumed in responding to changes resulting from regulatory intervention.

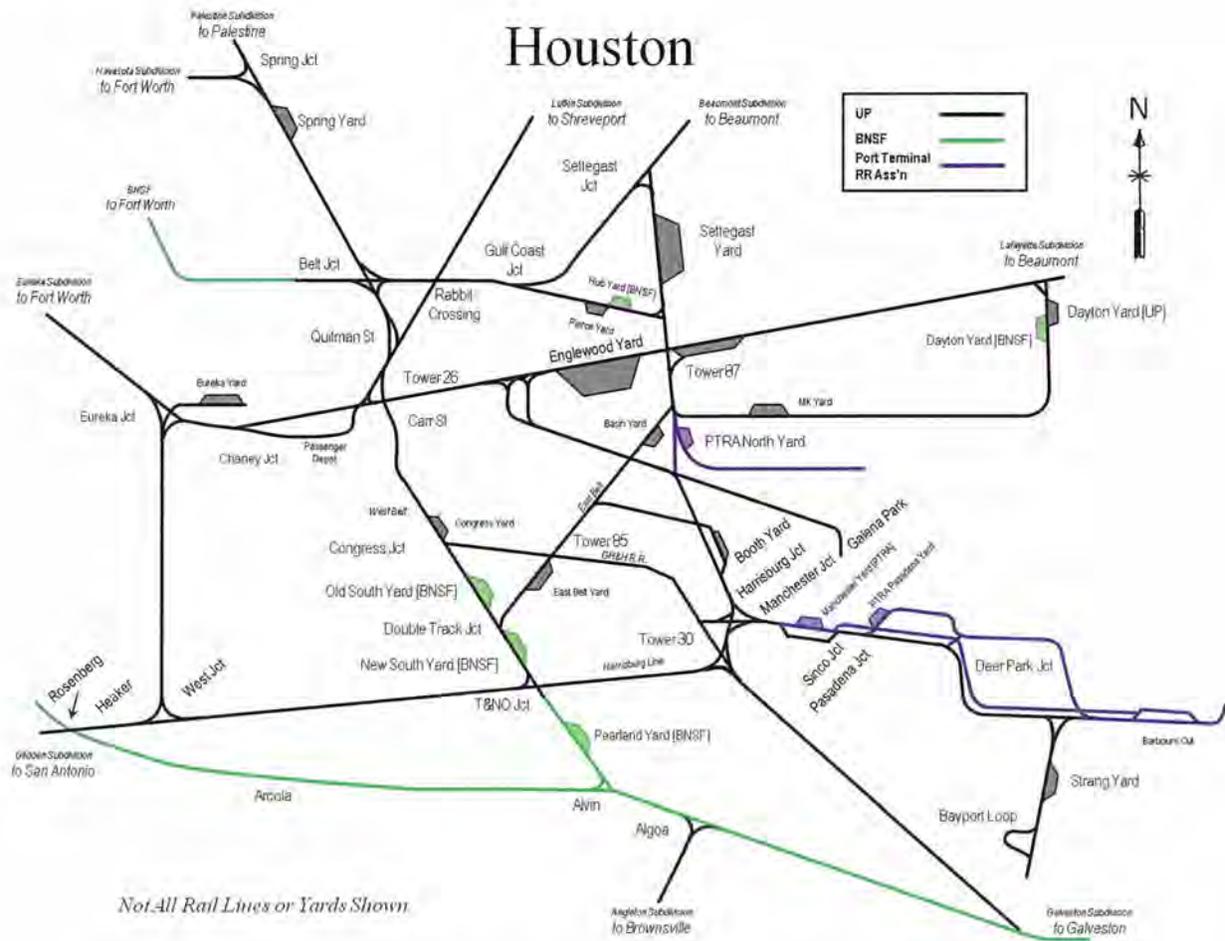
In the section below, UP's first two illustrations of the negative impacts of NITL's proposal focus on major urban areas, but our third illustration shows that similar problems would arise if shippers could use forced reciprocal switching where less switching presently occurs. In many cases, forced switching would not be "feasible, with no adverse effect on existing service." *EP 711 Notice* at 4. The fact that two railroads interchange traffic within 30 miles, or within any number of miles, of a shipper facility does not mean the railroad serving the facility has local service in place to move traffic from that facility to the interchange point. The railroad might move cars from the shipper facility in the opposite direction from the interchange to a yard and place the cars on a through train that never passes the interchange. Providing new "switching" service might require additional locomotives and crew—indeed, it might be a lengthy move from the yard used to serve the shipper facility to the interchange point. Or the interchange might not have the capacity to accommodate the volume of cars that would move using forced switching without interfering with other traffic. If existing facilities are inadequate to support interchange, the railroad losing the line-haul would have no incentive to invest, for obvious reasons, and the railroad gaining the line-haul would have a diminished incentive to invest, because it would have to account for the risk the traffic could revert to the original railroad. Moreover, the use of reciprocal switching dramatically reduces the ability of the railroad providing the switching to prevent back-ups of traffic at shipper facilities from undermining service to other customers. We illustrate these issues, which would arise unless access fees were properly computed, in the examples below.

B. Illustrations of the Impacts of Forced Reciprocal Switching on Yard Operations

1. Houston

NITL's proposal has the potential to significantly impair UP's ability to efficiently serve customers in and move traffic through the Houston area, one of the busiest terminal areas in the UP network. A map of the Houston area is provided below in Figure 8. Capacity in Houston is an extremely precious asset. Houston is densely populated and has complex industrial infrastructure, including port facilities, and there is little or no room to expand existing yards. Also, a large amount of traffic originates and terminates in Houston, which means UP cannot expand its effective local capacity in Houston by routing through traffic around Houston. UP's only practical means of addressing capacity constraints in Houston is to develop and implement transportation plans that make the most efficient use of existing facilities, and that is exactly what UP has done.

Figure 8: Houston Area



UP’s Houston-area transportation plans are designed to protect and preserve existing capacity by limiting the number of times cars are handled as they move into and out of Houston. UP has streamlined its Houston operations to run primarily out of two yards: Englewood and Settegast. Englewood, UP’s largest yard in Houston and its third busiest yard overall, operates as a network yard primarily for movements to and from the west and south of Houston. Settegast, UP’s second largest yard in the Houston area, operates as a network yard primarily for movements to and from the north and east of Houston. As network yards, Englewood and Settegast focus on receiving, building, and launching through trains to or from areas outside of Houston, rather than supporting service to local industries. Cars that flow to Englewood and

Settegast for delivery to local customers are transferred to UP's Houston-area industrial support yards for local delivery.²⁰

UP's operations in Englewood and Settegast are carefully coordinated with operations at nearby industrial support yards. UP's Houston-area industrial support yards include Strang, which serves customers to the southeast of Houston, including many large chemical shippers located on UP's Bayport Loop; Spring, which serves customers in North Houston; Congress, which serves central Houston; and Eureka, which serves northwest Houston. UP designed moves between its network and support yards based on car origins and destinations, and efforts to minimize congestion on the lines linking its yards. Maintaining a balanced, coordinated relationship among the Houston-area yards is vital to avoiding congestion and delays to traffic moving to and from Houston.

The threat posed by NITL's proposal can be illustrated by considering the potential consequences for traffic moving to and from shippers on the Bayport Loop. In general, the threat comes from two sources, which we describe in more detail below. First, UP currently is able to move cars originating on the Bayport Loop out of Houston quickly and efficiently, minimizing the time they spend in yards, which frees capacity for other traffic. Interchanging those cars with BNSF would mean more movements in Houston and less available capacity in UP yards in Houston, interfering with service to other UP customers. Second, UP's transportation plans depend on moving substantial volumes of traffic from the Bayport Loop. If UP volumes drop because of forced switching, UP would have to adopt less efficient plans for the remaining traffic, again causing a deterioration in service provided to other UP customers.

²⁰ As network yards, Englewood and Settegast lack the capacity to perform industry switching for local customers. It would likely require installation of many miles of additional tracks to allow Englewood and Settegast to perform as both network yards and industrial support yards.

a) UP's current service is highly efficient and helps avoid congestion in Houston.

UP handles a significant volume of traffic on the Bayport Loop, and it has established highly efficient service for that traffic. When a loaded car is released by the customer, UP picks up the car on a local train and delivers it to Strang. At current traffic levels, UP can build trains several days a week that run directly from Strang to UP's Livonia Yard, near Baton Rouge, Alton & Southern's Gateway Yard in East St. Louis, and UP's North Little Rock Yard in Little Rock, Arkansas, without any additional handling in Houston. On other days, UP switches cars at Strang into blocks for Livonia, East St. Louis, and North Little Rock. UP moves the Livonia block to Settegast, where it is placed on a through train, and the East St. Louis and North Little Rock blocks to Spring, where they are placed on through trains. After arriving in Livonia, East St. Louis or North Little Rock, these blocks are switched and combined with other traffic that can run deep into other railroads' systems before being broken up. For example, with current traffic levels, UP is able to build blocks for CSX's Selkirk Yard in Albany, New York, and NS's Conway Yard near Pittsburgh. This blocking reduces congestion in terminals outside Houston and provides better service for customers nationwide. Today, a car blocked in Strang for Livonia, East St. Louis, or North Little Rock can be on a train out of Houston approximately 24 hours after being released by the customer.

b) Forced interchange would be inefficient and would add unnecessary movements between yards in Houston.

Under NITL's proposal, certain shippers on the Bayport Loop might be able to force UP to switch their traffic to BNSF, which also has yards in Houston. UP currently interchanges some traffic that flows to and from Strang with BNSF, so it is easy to illustrate the potential consequences of being forced to interchange additional cars with BNSF.

Under NITL's proposal, the cars from shippers on the Bayport Loop would endure a longer, less efficient, more circuitous move through Houston that would consume additional capacity on both UP and BNSF. For example, if a Bayport Loop shipper wanted to send a car to Albany, New York, with BNSF as the line-haul railroad rather than UP, UP would pick up the car and deliver it to Strang. After switching at Strang, instead of placing that car in an East St. Louis Block for through movement, UP would classify it for a short distance transfer movement. Absent reaching a different arrangement with BNSF, UP would classify the car into an Englewood block for movement to Englewood. At Englewood, UP would switch the block again, this time to an interchange track, where it would wait for a BNSF crew to arrive and take the cars to BNSF's New South Yard. For UP, the reciprocal switching process, from the time the customer releases the car to the car's departure from Englewood would likely take at least 60 hours. In other words, cars UP is forced to switch to BNSF would likely spend at least 36 extra hours consuming UP's capacity in Houston than if they had moved in single-line service, without even having left Houston.²¹

Moreover, the 36 or more extra hours that the cars would spend on UP are only half the problem for UP (without even beginning to address the additional capacity consumed on BNSF). For every loaded outbound car affected by NITL's proposal, BNSF must move an empty car into Houston for UP to deliver to the customer. On the return trip, this car would cause the same inefficiencies, experiencing the same delays and consuming the same additional capacity on UP.

²¹ At New South Yard, BNSF would presumably switch the car again and block it for movement out of Houston. Thus, all in all, the reciprocal switching process, from the time the customer releases a car on the Bayport Loop to the car's departure on a BNSF train from New South Yard would likely take at least three days, as compared to one day for a car placed on a train to East St. Louis at Strang.

This delay is intrinsic in NITL’s proposal. Every car that is subject to forced switching under NITL’s proposal would inevitably spend more time in Houston, consuming more capacity on both UP and BNSF. Moreover, the two-day delay assumes optimal operating conditions—that is, no additional, unforeseen delays that would add to the time cars would spend in Houston, increasing congestion, reducing capacity, and slowing service for all customers. But UP commonly experiences delay when interchanging traffic with BNSF in Houston. BNSF’s New South Yard is subject to volume swings and capacity constraints, and UP is affected when BNSF has to space traffic into the New South Yard. UP must hold onto cars longer than planned, consuming capacity at Englewood, until BNSF has resources and space available to pull the cars from our yard. With or without additional delays, loss of capacity poses a very real threat to UP’s ability to provide safe, efficient, reliable service to all Houston-area customers.

In addition, every additional car that UP must switch for BNSF would add to the length of the trains used to interchange traffic between the railroads; indeed, new interchange movements may be required. Each longer—or additional—train would consume additional track capacity as it moves between UP and BNSF in Houston, blocking rail-to-rail crossings and reducing train speed throughout Houston. If longer trains are used, they may require more movements to fit into yards, which may block access to yard tracks and cause delays for other trains waiting to enter the yard.²²

The prospect of adding more interchange traffic to Englewood is especially concerning. Englewood is one of the primary network yards on UP’s system. Congestion at Englewood has

²² Additional interchanges between UP and BNSF would also interfere with automobile traffic in the Houston area. The usual train route between Englewood and New South Yard traverses more than a dozen at-grade road crossings. Every additional car that is interchanged means additional blocked crossings, additional traffic delays, and additional risk at every grade crossing.

the potential to cascade through our network, and UP's transportation plans are designed to avoid switching cars in Englewood whenever possible. The additional switching at Englewood that could occur under NITL's proposal has the potential to throw the entire Houston area, and perhaps our entire network, into disarray by shifting traffic volumes in ways that were not planned and would not be predictable.

c) Forced interchange would degrade service by disrupting efficient transportation plans for traffic in Houston.

Not only would cars diverted to BNSF require additional switching and consume capacity at Englewood, but the loss of significant volume would also result in additional switching for cars remaining on UP. If UP does not have sufficient volume at Strang to build trains or blocks of cars for destinations outside of Houston, UP would have to perform additional switching within Houston. For example, if there is not sufficient volume at Strang to build a North Little Rock block, cars that previously departed Houston from Strang would likely move first to Settegast to be blocked with other cars destined for North Little Rock. It is likely that these cars would stop again at an intermediate yard between Houston and North Little Rock for additional switching. This would require additional movements between Strang and Settegast and additional handling at Settegast. The loss of block volume would also create congestion at intermediate yards outside Houston.

Moreover, it is important to recognize that UP's opportunities to gain traffic volume would not offset the losses it could suffer under NITL's proposal, even if UP would choose to pursue that traffic. UP solely serves many more customers in the Houston area than BNSF. And, even if the volumes subject to forced access were balanced in the overall Houston area, UP's ability to build blocks at Strang would still be disrupted because UP and BNSF would

likely interchange traffic subject to forced switching at Englewood, where they interchange traffic today, not at Strang.

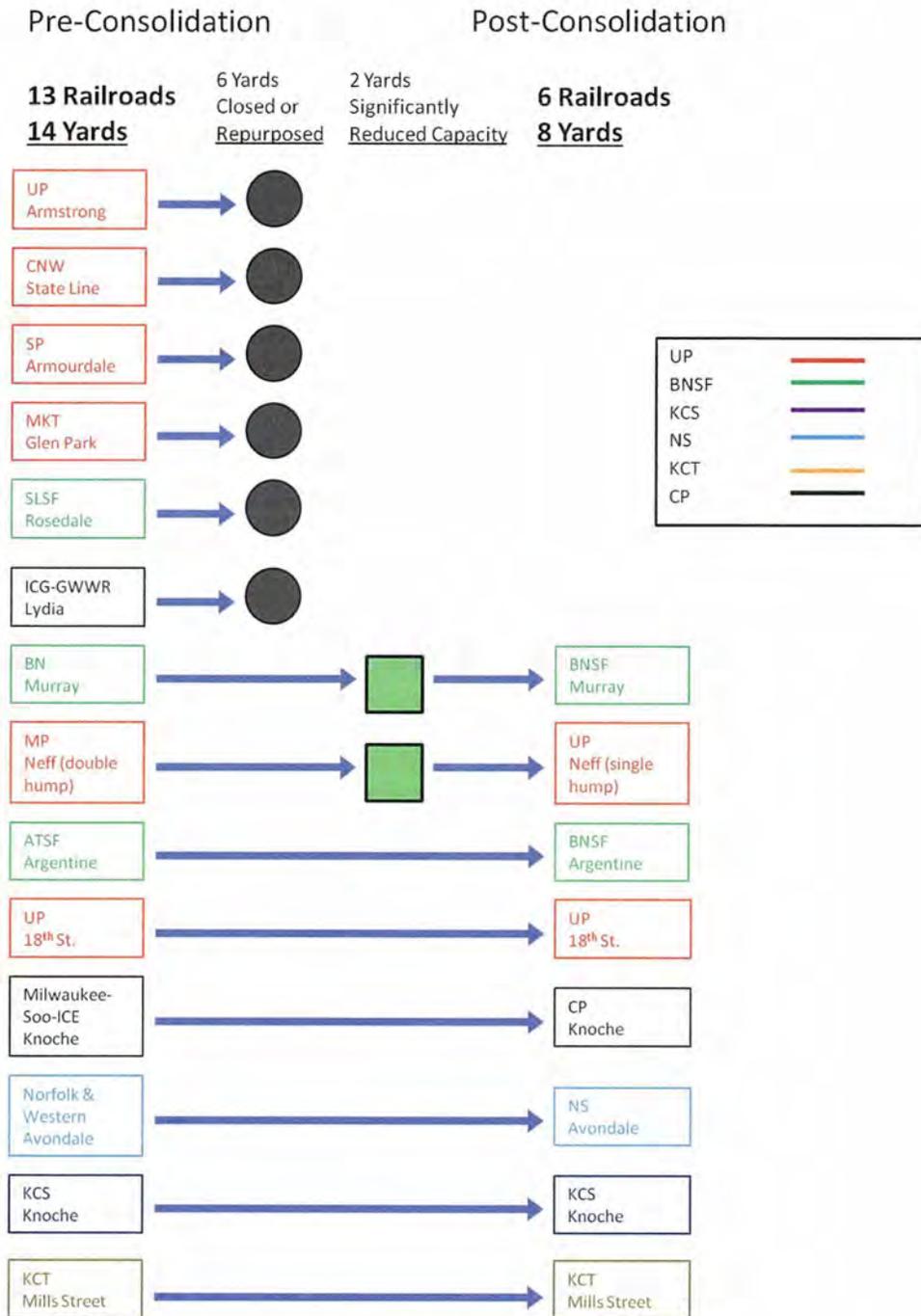
2. Kansas City

NITL's proposal also has the potential to disrupt UP's ability to use its Kansas City facilities in support of optimized network traffic flows. Kansas City is a prime example of a terminal in which consolidations have allowed UP to reconfigure its operations to increase efficiency and reliability by eliminating unnecessary interchanges and eliminating or repurposing the yards used to support those interchanges. Kansas City is also a prime example of the enormous benefits that inure to shippers, the transportation industry, and the public when railroads are allowed to plan for, invest in, and manage their business to improve service and reliability. Forcing UP to perform more reciprocal switching in Kansas City could overwhelm the infrastructure that continues to support UP's operations in Kansas City and would disrupt UP's ability to use its Kansas City facilities to support operations at other locations on its network.

In the 1970s, thirteen railroads operated a total of fourteen interchange yards in the Kansas City area, creating a terminal area that was inefficient and congested on the best of days. Customers located in and around Kansas City were commonly served directly by a single railroad, and that railroad might have to interchange traffic with any of the other railroads operating in the terminal to provide the customer with a through route. The congestion resulting from the need to interchange traffic originating or terminating in Kansas City was compounded by the fact that, in this period of balkanized rail networks, most of these railroads also needed to use Kansas City to interchange traffic originating and terminating beyond Kansas City. Capacity in all fourteen yards was devoted to interchange.

Railroad consolidations ultimately reduced the number of railroads operating in Kansas City to six. The resulting expansion of single-line service greatly simplified terminal operations, diminished the need for interchanges, and reduced the need for yard facilities. Figure 9 below shows the thirteen railroads and their yards in Kansas City as of the early 1970s, as well as the changes that have taken place since the 1970s.

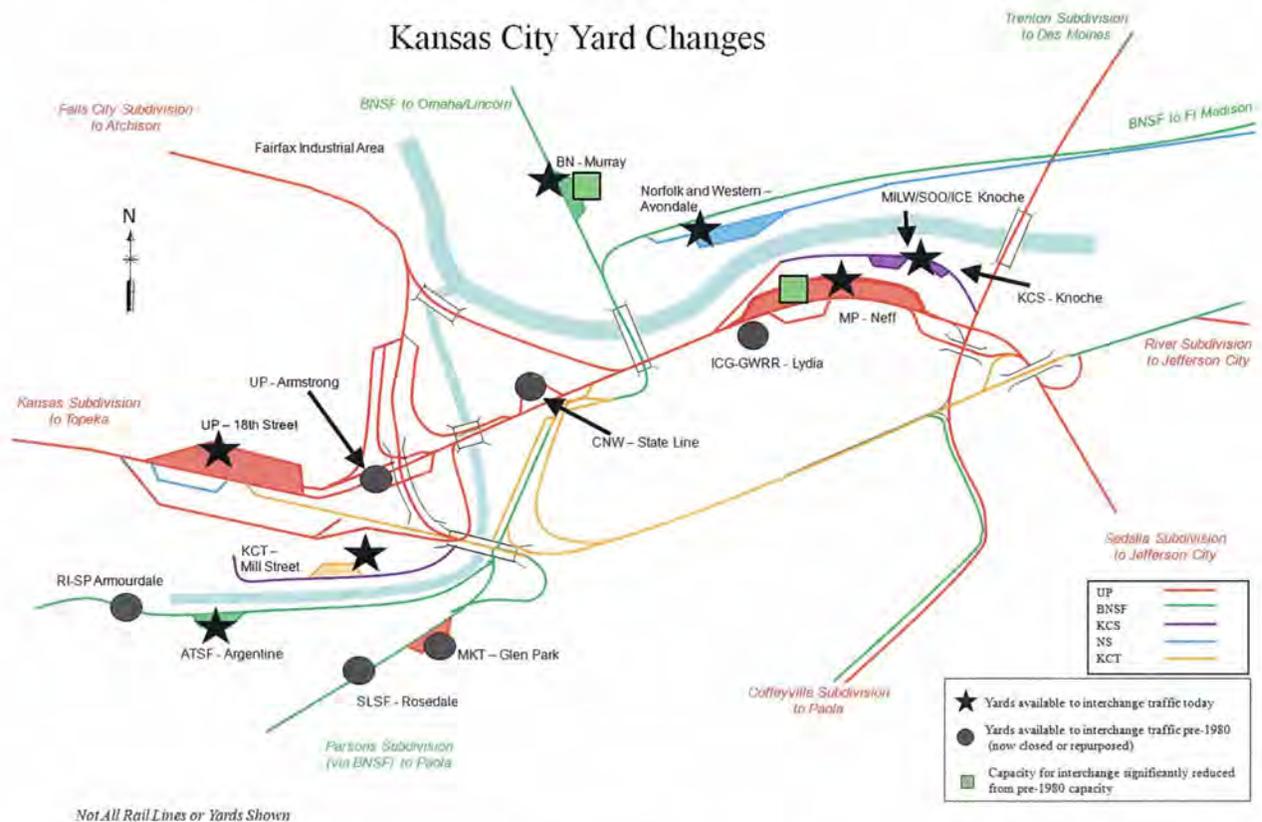
Figure 9: Kansas City Consolidation



a) Elimination of interchanges for traffic to and from Kansas City reduced the need for yard capacity.

UP now uses only three of the six yards in Kansas City that were owned by its predecessors. Other railroads serving Kansas City also have closed yards as they consolidated, as shown in Figure 10. On UP, only two of our remaining three yards are still used to interchange manifest traffic with other railroads serving Kansas City: 18th Street and Neff. With the reduced need to interchange traffic in Kansas City, UP closed Glen Park, State Line, and Armstrong yards. UP also removed one of the classification humps from Neff, and it has repurposed the former SP's Armourdale Yard to be used exclusively for auto multilevel and through traffic. UP's transportation plans have been redrawn to support significantly less car handling in Kansas City, and UP invested significantly in redesigning its remaining facilities to handle significantly more run through traffic.

Figure 10: Kansas City Yard Changes



As a result of these changes, UP is providing more efficient and more reliable service than ever before to customers in Kansas City and to the larger pool of customers whose traffic moves through the terminal and no longer requires interchange in Kansas City. For example, before UP’s consolidation with MKT, if an MKT-served customer in Texas wanted to move traffic to a UP-served customer in Kansas City’s Fairfax Industrial Area, the traffic would arrive at MKT’s Glen Park Yard, where it was classified, and MKT would then take it from its Glen Park Yard to UP’s Armstrong Yard, where it would be classified again, then moved to the Fairfax Industrial Area. As a result of UP’s consolidation with MKT, the need for an interchange was eliminated. Traffic from former MKT-served points now arrives at 18th Street or Neff, where it can be classified for delivery directly to the Fairfax Industrial Area, saving days in transit for the customer and reducing switching costs for the railroad.

b) New single-line service patterns allowed traffic to avoid Kansas City and reduced the need for yard capacity.

Another benefit flowing from UP's consolidations and the expansion of single-line service is that there is less need to use Kansas City to interchange traffic originating and terminating outside of Kansas City. In the 1970s, UP traffic coming from North Platte with ultimate destinations in St. Louis and Ft. Worth had to be interchanged in Kansas City. The UP traffic was delivered to Armstrong Yard, where the cars were classified. MKT interchanged cars from the UP yard and delivered them to MKT's Glen Park Yard for additional classification. MKT then moved the traffic heading south over trackage rights it possessed on the former Frisco line with ultimate destinations in Texas, including Ft. Worth. Traffic destined for St. Louis had to take a very inefficient route, traveling from Kansas City straight south toward Parsons, Kansas, and, eventually, taking almost the opposite direction back again traveling northeasterly to St. Louis, for eastern connections. Those cars spent relatively more time in yards waiting to be handed off. The frequent interchanges also increased the odds of a car missing its train and being delayed.

Under current transportation plans, and given current densities, however, UP can classify cars into blocks at locations wholly outside the Kansas City terminal and put them on trains that avoid Kansas City entirely. For example, UP creates blocks of 25 or more cars in North Platte, and trains that carry those blocks completely bypass Kansas City to get to their destinations, for example in St. Louis and Ft. Worth. This run-through traffic, in turn, opens up capacity within the Kansas City terminal, which allows UP to use the remaining capacity to support operations that can be handled most efficiently in Kansas City. The MKT-Fairfax example is only one example of a situation that could be illustrated for other components of the UP system.

NITL's proposal threatens to disrupt these efficient operations. If customers divert a significant number of cars from blocks on trains that now bypass Kansas City, UP might be forced again to stop trains in Kansas City to pick up additional cars to fill a train, for example to St. Louis and Ft. Worth. This means more trains in Kansas City, with more switching in Kansas City, with more car inventory, and decreases in velocity and customer service. The additional switching would also increase UP's operating costs.

c) NITL's proposal would disrupt UP's efficient use of yard capacity in Kansas City.

UP's ability to plan for new traffic and the agility that allows us to react to market changes are well illustrated by UP's current operations in Kansas City that address the demand for freight transportation of frac sand used to support natural gas drilling. UP uses its yard capacity in Kansas City to prepare large blocks of empty cars used for frac sand that move on a train that delivers the blocks directly to several industrial sites in Minnesota. According to the current plan, empty sand cars primarily from Texas are accumulated in Kansas City at Neff Yard. At Neff, deep blocks of empty sand cars, generally no fewer than 25 cars to a block and up to 40 cars, are prepared and move on a single train north through the Falls City Subdivision and are run around Council Bluffs to multiple industries located in northern Minnesota. The blocks are passed to local serving jobs with minimal handling—minimizing the need for classification or yard storage space in our major Minnesota yard in South St. Paul. Indeed, there is no need for classification upon the cars' arrival in Minnesota. The efficient car handling is continued as the loaded cars travel south. When the empties are loaded, the loaded blocks are prepared, and a train collects the blocks from the several industries and travels south to Mason City. Significant yard capacity in Mason City is dedicated to these loaded blocks which are classified for destinations in Texas and the Gulf Coast.

If more yard capacity in Kansas City were required for forced reciprocal switching, then the capacity needed to prepare the blocks of empty cars that are part of this efficient operation would be eliminated or greatly reduced. That would, in turn, impair UP's ability to build deep blocks of cars in its Kansas City yards, and would re-introduce the practice of creating smaller blocks of cars that would have to be collected from multiple yards in geographically diverse locations (for example, they might be collected in Council Bluffs and South St. Paul), resulting in less efficient operations. UP's ability to build deep blocks at Neff that can be delivered directly to the sand industrial sites in the north frees up the yards in South St. Paul and Council Bluffs to handle other traffic.

In addition, UP has designed Kansas City's yard capacity in such a way that the reciprocal switching that currently occurs between the BNSF and UP in Kansas City occurs between BNSF's Argentine and UP's 18th Street yards. As Figure 10 shows, the two yards are located in close proximity, and the disruption such reciprocal switching causes on the UP mainline in that location is relatively tolerable. Although the existing level of reciprocal switching does not currently exceed the capacity of 18th Street, if the volume of reciprocal switching increased materially, then UP would likely also have to employ Neff to facilitate reciprocal switching. As Figure 10 also shows, while 18th Street is just over the river from Argentine, Neff is not only across the river, but it is on the far side of the Kansas City terminal. Movements from Neff to Argentine would be required to traverse the extremely busy lines that slice through the middle of the terminal and over which all six railroads remaining in Kansas City run.

Considering for a moment only UP traffic, UP originates 17 through trains from the Kansas City area on a daily basis. Generally, ten trains depart from Neff, two from 18th Street,

four from Armourdale, and one from a customer at the Fairfax Industrial Area. In addition, there are two daily locals, one leaving from Neff to Trenton, Missouri, and another leaving 18th Street to Topeka, Kansas. In addition, UP currently interchanges traffic on a daily or regular basis:

1) from Neff, with NS at Avondale Yard, BNSF at Murray Yard, and with KCS at Knoche Yard (daily); 2) from 18th Street, with NS at Avondale and with BNSF at Argentine (daily); 3) autos from Armourdale, with the KCT (daily) and with NS at Avondale (six days per week). When one considers the activity that occurs among all of the other railroads that interchange in Kansas City, and then considers the additional traffic that might be interchanged under a regime of forced switching, Kansas City would have increased interchange on up to 25 pairs of connections. All of those movements would compete for capacity on the four routes through the terminal. Kansas City remains the second busiest terminal in the country, and increasing traffic on the busy lines in the Kansas City terminal could create extreme congestion and delay traffic moving to and from many parts of the U.S. rail network.

As UP has rationalized its network to satisfy market demand and customer service needs, we have significantly reduced the number of yards and reduced existing yard capacity in Kansas City and across our system, and redesigned transportation plans in a way that makes the highest use of the yard capacity that we retained to expedite movement of cars from our shippers to our receivers. To force UP to use that capacity in ways that reintroduce inefficiency and delay, like performing significantly more reciprocal switching, makes no sense for the customers, railroads, or the public.

3. Sioux City

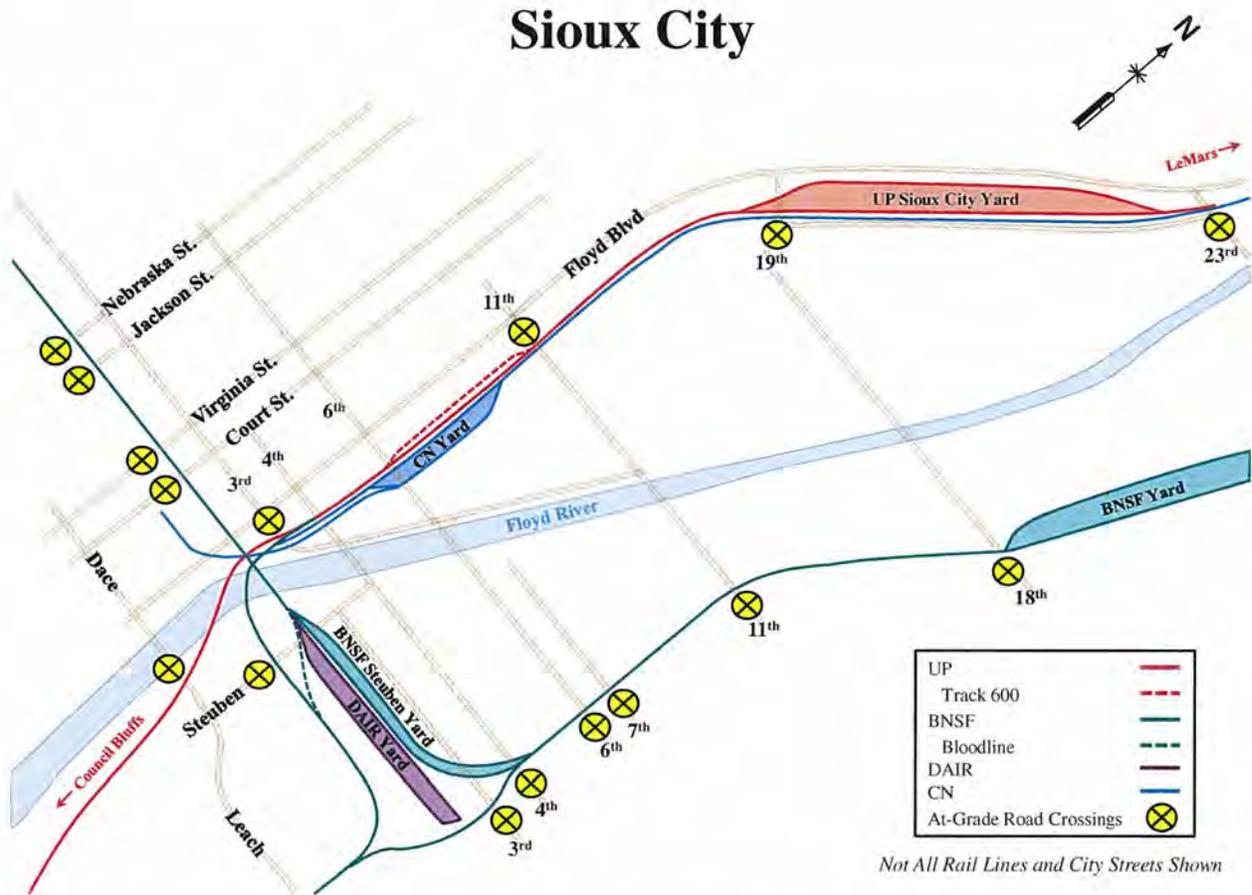
Even outside of major urban areas like Houston and Kansas City, NITL's proposal could disrupt service to customers and impose significant costs on railroads that are forced to provide reciprocal switching where they interchange some traffic today, but the existing infrastructure

does not permit an efficient interchange. Interchanges were built and have been maintained to accommodate historic traffic patterns. Consequently, the infrastructure at existing interchanges may lack capacity to handle additional traffic or certain types of traffic the railroads have not interchanged historically without interfering with other operations, incurring additional costs, and adversely affecting the public. UP's operations in Sioux City, Iowa, illustrate these issues.

Four railroads operate in Sioux City: UP, BNSF, CN, and Dakota and Iowa Railroad ("DAIR").²³ Currently, these railroads interchange traffic by using each other's mainline and yard infrastructure, which is located in a concentrated area surrounded by industrial, business, and residential districts in downtown Sioux City.

²³ BNSF, CN, and DAIR are collectively referred to as "foreign railroads" in this section.

Figure 11: Railroads Operating in Sioux City, Iowa



UP's Sioux City operations are based out of UP's Sioux City Yard and consist of, among other things, one yard transfer job (YSX50) and two local jobs. At UP's Sioux City Yard, UP switches and blocks cars released by customers and picked-up by the local jobs for either outbound UP trains or for interchange with the foreign railroads on the YSX50. Cars moving in UP single-line service typically leave on an outbound UP train within 12 hours of arriving in UP's Sioux City Yard. Cars destined for the foreign railroads, on the other hand, typically remain at UP's Sioux City Yard for 24 hours before YSX50 moves those cars. This means cars moving in interchange service remain at UP's Sioux City Yard for 12 more hours—at a minimum—than cars moving in UP single-line service. Furthermore, these 12 additional hours

at UP's Sioux City Yard do not account for the transfer time during the complex interchange operations described below or for the delays at a foreign railroad's yard. Depending on the foreign railroad's operations, cars moving in interchange service could remain in Sioux City for another day, if not more, while being switched at the foreign railroad's yard and launched on an outbound train.

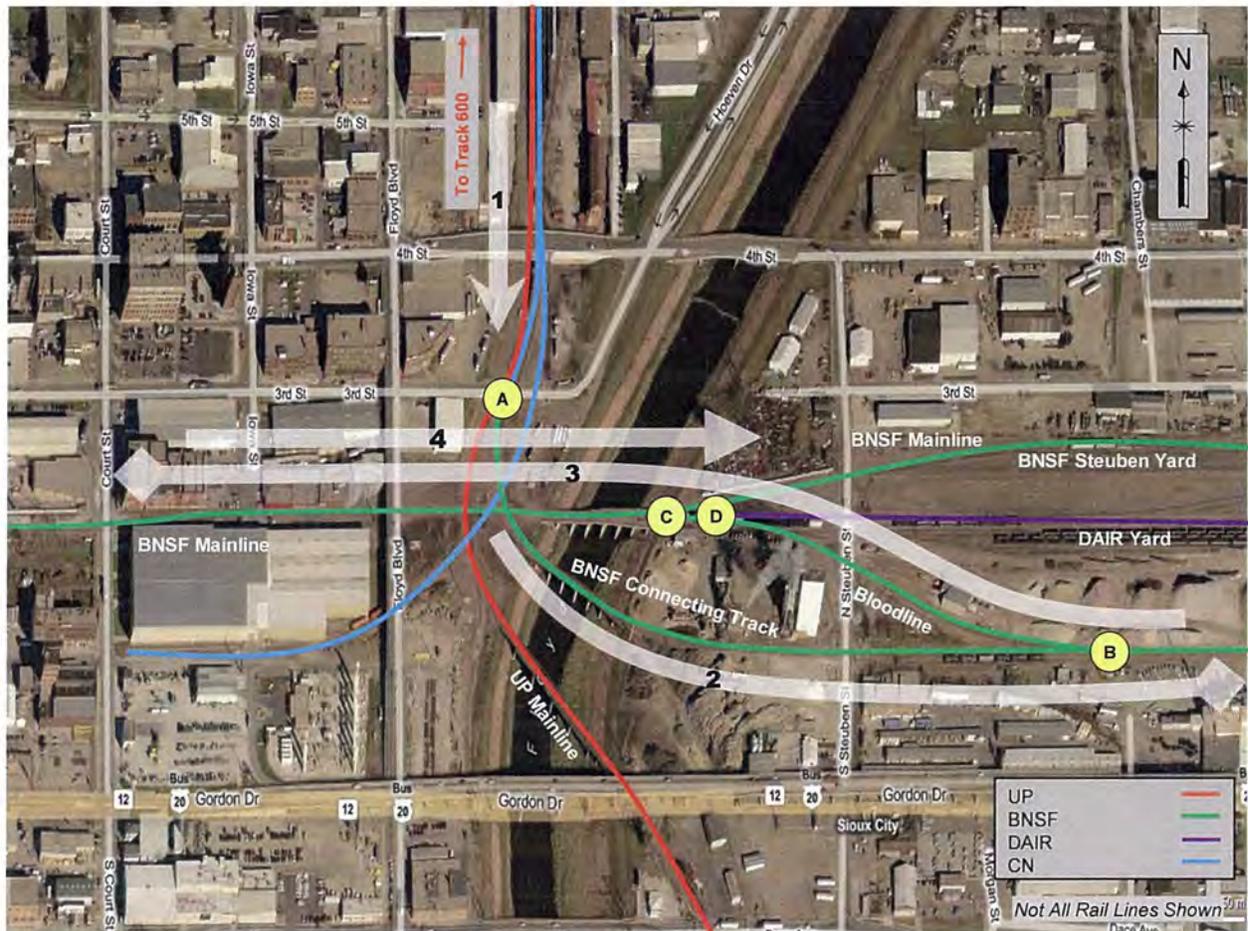
a) Sioux City's "see-saw" interchanges are inefficient.

A portion of the delay associated with interchanging carload traffic between UP and the foreign railroads in Sioux City is attributable to the existing interchange infrastructure. UP and the foreign railroads receive cars in interchange at different locations in Sioux City: UP receives cars at UP's Track 600, and the foreign railroads receive cars at their respective yards. To access each other's existing interchange infrastructure, the railroads must complete "see-saw" movements.²⁴ See-saw movements involve a series of steps by which the crew pulls the train forward and shoves the train back after throwing multiple switches so that the train can move onto different track.²⁵ YSX50 interchanges approximately 30 cars per day, six days a week with the foreign railroads in this manner.

²⁴ UP and CN can access each other's interchange infrastructure without completing a see-saw movement, but CN must complete a see-saw movement to interchange with BNSF or DAIR.

²⁵ See-saw movements are common when railroads cannot pull directly into each other's yards or other interchange infrastructure because of the configuration of their tracks and connections to each other.

Figure 12: See-Saw Move Between UP and Foreign Railroads



To interchange carload traffic with the foreign railroads, YSX50 departs UP's Sioux City Yard shoving the train south on UP's mainline until reaching CN's Yard near 11th Street. YSX50 shoves into CN's Yard, drops off the CN block of cars, and pulls back onto UP's mainline. After dropping off the CN block of cars, YSX50 begins the see-saw movement by shoving south on UP's mainline, stopping before 3rd Street. The conductor throws the 3rd Street switch (Point A on the map) onto the BNSF Connecting Track, and YSX50 shoves east until the head locomotive on the train clears the switch to the Bloodline (Point B on the map). After throwing the switch onto the Bloodline, YSX50 pulls forward onto the Bloodline and stops before reaching the western end of the Bloodline, waiting to obtain authority from the BNSF

dispatcher to operate over BNSF's mainline. Once the BNSF dispatcher authorizes the movement, the conductor throws the switch onto BNSF's mainline (Point C on the map), and YSX50 pulls forward until approximately Court Street. The conductor then re-aligns the switch from the Bloodline to BNSF's mainline (Point C on the map) and proceeds to align multiple switches into BNSF's Steuben Street Yard or DAIR's Yard (Point D on the map). YSX50 shoves into BNSF's Steuben Street Yard and then DAIR's Yard (or vice versa) and drops off blocks of cars to BNSF and DAIR.

YSX50 then reverses the see-saw movement to return to UP's Sioux City Yard, including obtaining authority from BNSF's dispatcher to go back onto BNSF's mainline. On the return movement, YSX50 stops at Track 600 to pick up cars that the foreign railroads have forwarded in interchange to UP.²⁶ After picking up the cars UP received in interchange at Track 600, YSX50 returns to UP's Sioux City Yard where those cars are switched onto local or outbound trains.

The see-saw interchange in Sioux City is particularly time consuming because the crew performing the see-saw movement must shove the train for the majority of the movement—that is, the engineer on the head-end locomotive must shove the train backward as opposed to pulling the train forward for the majority of the see-saw movement. Shoving the train adds additional time to any movement because shoving movements operate at slower speeds for safety. Federal regulation also requires that an employee protect the movement for the engineer who is operating

²⁶ YSX50 does not pick up cars at the foreign railroads' yards. Instead, UP receives cars in interchange from the foreign railroads at Track 600. In order to access Track 600 and to forward cars to UP, the foreign railroads (except CN) must complete a see-saw movement similar to the see-saw movement described above with YSX50.

the locomotive at the opposite end of the train.²⁷ Basically, an employee—usually the conductor—must be the eyes and ears for the engineer by walking with the rear end of the train as it is shoved backward at a slower speed. If the UP and BNSF mainlines are clear, YSX50 can complete the complicated see-saw interchange described above in two hours. If, however, the mainlines become occupied after YSX50 departs from the Sioux City Yard, YSX50 must wait for the mainlines to clear. For example, YSX50 often waits—typically for an hour—on the BNSF Connecting Track (or the Bloodline) for the BNSF mainline to clear and for the BNSF dispatcher to authorize the movement.

b) Sioux City has limited capacity for interchanges.

Although UP and the foreign railroads interchange traffic in Sioux City, the Sioux City interchange has limited capacity. As mentioned above, UP receives cars in interchange from the foreign railroads at Track 600, including cars that UP would be forced to reciprocally switch for the foreign railroads under NITL's proposal. Track 600, however, has capacity for no more than 25 cars. If the interchange traffic volume increases due to forced reciprocal switch and Track 600 does not have available capacity, the foreign railroads would likely hold the additional cars at their yards until Track 600 has available capacity or the railroads would likely increase the frequency in which they interchange. Either option would unnecessarily consume resources and create unnecessary congestion. If the foreign railroads hold the cars, the additional cars would consume yard capacity and create yard congestion for the foreign railroads. If the railroads interchange traffic more frequently, the additional see-saw interchange would consume UP's and BNSF's mainline capacity during the time-consuming movement, impeding traffic flowing to,

²⁷ See 49 C.F.R. § 218.99.

from, or through Sioux City. Furthermore, UP would have little incentive to expand Track 600 for reciprocal switch traffic because UP would not receive the line-haul revenue to justify the expansion. Indeed, if Track 600 lacks capacity because some shippers forced UP to reciprocally switch traffic, other shippers relying on interchange service in Sioux City would be affected. Sioux City shippers who may be open to reciprocal switch now or shippers who use multiple carriers that interchange in Sioux City would experience additional delays if their cars were held until Track 600 had available capacity. In short, forced reciprocal switching in Sioux City under NITL's proposal would result in more resources being used to move the same amount of traffic in a less efficient manner while disrupting service to other railroad customers.

The impact on UP's operations in Sioux City would be even more severe if UP were forced to reciprocally switch unit trains for its customers within 30 miles of Sioux City. If UP were forced to provide reciprocal switching for unit trains, the interchange would consume mainline capacity for significant periods of time because UP does not have capacity in Sioux City to hold unit trains off of its mainline.²⁸ Once again, Track 600 has capacity for no more than 25 cars, and UP's Sioux City Yard does not have capacity to hold unit trains without fouling UP's mainline. Likewise, the BNSF Connecting Track and the Bloodline do not have enough capacity to hold unit trains without fouling BNSF's mainline. Therefore, regardless of the location where the unit train is interchanged in Sioux City, a unit train would consume mainline capacity and create congestion, affecting traffic flowing to or from Sioux City, as well as traffic passing through Sioux City on other trains. Depending on the size of the unit train, the train

²⁸ UP's concern about being forced to reciprocally switch unit trains in Sioux City under NITL's proposal is not hypothetical. UP has multiple customers near Sioux City that ship unit trains of approximately 80 to 140 cars per train, and those customers could potentially force UP to reciprocally switch their unit trains under NITL's proposal.

could also block multiple road crossings for significant periods of time. For example, if BNSF pulls or shoves a 135-car unit train onto UP's mainline through the BNSF Connecting Track, the train would block 11th Street and 19th Street (and possibly 3rd Street) while crews remove and add locomotives (or reconfigure distributed power locomotives) and perform necessary inspections. During this time, the unit train would sit idly on UP's mainline and block a minimum of two road crossings for 30 minutes to over an hour. As Figure 11 above illustrates, Sioux City drivers depend on the many at-grade road crossings to enter or leave the industrial, business, and residential districts surrounding the railroads' infrastructure, and blocking these road crossings for extended periods of time would significantly delay and create additional safety risks for those drivers.

Moreover, UP's ability to build additional capacity in Sioux City to accommodate unit trains is restricted by the industrial, business, and residential districts surrounding the area, not to mention other railroad's infrastructure. Again, UP would have little incentive to invest in a track to hold a unit train that would move via line-haul on another railroad, but even if UP could build additional capacity in Sioux City to hold unit trains, UP could not avoid at-grade road crossings for building such capacity. Therefore, if UP could build such capacity, the idle trains would nonetheless block multiple at-grade road crossings, disrupting Sioux City drivers who utilize those at-grade road crossings. UP interchanges cars with other railroads in Sioux City, but the existing facilities in Sioux City could not readily accommodate additional interchange activity that might result from adoption of NITL's proposal, including interchanges of unit trains. The result would be added costs and delay, disrupting railroad operations in and through Sioux City, and imposing burdens on the residents of Sioux City.

C. Forced Reciprocal Switching Would Limit UP's Ability to Monitor and Control the Flow of Inbound Traffic to Prevent Congestion.

In both large and small terminals, adopting NITL's proposal would have a significant impact on UP's ability to monitor and control the flow of inbound traffic to prevent congestion. As discussed above, a yard's effective capacity is reduced as car dwell time increases—that is, as rail cars spend more time in a yard. When cars spend extra time in a yard, they occupy track space needed to handle other cars. If the cars also need additional switching, they consume even more resources, which further interferes with the handling of other cars, increases the time those other cars spend in the yard, and reduces overall network velocity and service. UP has made great strides in reducing a significant source of increased car dwell times: mismatches between the number of cars moving to a customer's location and the customer's track capacity at that location. UP addressed this issue by developing car management technology that allows it to match the flow of cars to and from customer locations and with the track capacity at those locations.²⁹ However, UP cannot monitor and control the flow of loaded and empty rail cars coming to it for reciprocal switching. This has been a chronic problem in the rail industry—one that would become worse if railroads were forced to perform more reciprocal switching.

The costs of holding cars for customers. If a rail car arrives in a yard but cannot be delivered because the customer's track is full, the car will consume extra yard resources. If the

²⁹ Demurrage charges are one tool that railroads use to discourage shippers from using railroad yards to hold their cars when their locations are full, but active management is far more effective than demurrage. The party that directs a car to a location may not be, or may claim not to be, the party legally responsible for demurrage. This either renders demurrage uncollectable or leads to litigation about demurrage charges. Even more important, as discussed in the text, problems caused by a lack of holding track capacity at just a few locations can multiply and spread, and demurrage charges are not structured to compensate a railroad for addressing the costs of congestion.

railroad knows the customer's track is full, then rather than switch the car to a local train for delivery, the railroad will need to find yard space for the car and switch the car to the holding track. Otherwise, the car will make a wasted round-trip, and upon its return must be switched off the local train and held for later delivery. If this occurs infrequently, it is an inconvenience that adds expense. If this occurs with multiple customers or with many cars, yard operations can rapidly deteriorate and costs can quickly multiply.

Most yards are not sized to store cars for customers or to support the switching needed to move cars off holding tracks as customer track becomes available. Switching cars from a track holding dozens of other cars requires multiple movements and space to perform those movements because a particular customer's cars will be mixed in with other cars on the holding track—it is not like reaching into a closet to grab a particular shirt. As a result, even when a space opens up at on customer's track, UP might be unable to get a car onto the next local train without delaying every other car on that train. Thus, as congestion increases, overall throughput decreases: the railroad can no longer handle other traffic efficiently even for customers that always have track space available. When congestion becomes particularly bad within the yard, railroads may need to hold trains outside the yard, occupying mainline sidings or capacity in other yards. This spreads congestion and its effects beyond the original source to other locations on the network. Experience has confirmed that it is very difficult to reverse such a downward spiral. That is why we are vigilant about preventing loss of fluidity in yards.

Matching inbound traffic to customer capacity. UP began using its car management technology, the Customer Inventory Management System ("CIMS"), in the Phoenix area in 2005. At the time, UP's yards had become congested as traffic flooded into the region faster than some shippers were unloading their cars and faster than we could spot and pull cars. The

congestion at Phoenix delayed deliveries to customers, obstructed building of outbound trains, and backed up trains on UP mainlines. Before CIMS, UP had no systematic way of monitoring whether its customers had sufficient track capacity at their locations to accept inbound cars. To implement CIMS, UP undertook a detailed survey of track capacity at customer locations. As customers submit waybill data prior to the initial movement of a loaded car, UP develops a detailed transportation plan for each car that determines how the car will move—train-by-train, day-by-day—from origin to destination. UP then uses that plan, together with data regarding prior and ongoing movements to and from the customer location and the customer's track capacity, to determine whether there will be sufficient track capacity at the destination when the car is scheduled to arrive. If a customer is planning to ship more cars to a location than the track there can accommodate when the cars will arrive, UP can address the situation with the customer before the new cars enter our network. In most cases, the process is informal: UP will bring the situation to the customer's attention and encourage the customer to unload cars faster or to make more space available by moving empty cars to a different location. But, in some cases, where the customer cannot or will not cooperate, UP has imposed embargos on consignees to keep or limit traffic from moving to locations with insufficient track space until inbound traffic matches outbound traffic.

However, when UP receives traffic for reciprocal switching at the destination, we lack the ability to monitor and control the flow of traffic provided by CIMS. For traffic that requires reciprocal switching at destination, UP receives an electronic message that a car will move to the destination, but we do not receive information about when the car is scheduled to arrive—the

next message UP gets is when the car is ready for interchange—so we cannot know in advance whether the location will have track capacity available to receive the car.³⁰

Even if UP received scheduling information for traffic that requires reciprocal switching at destination and knew that the track at destination would be full when a new car was scheduled to arrive, we could do little to prevent a problem. The information UP receives typically does not include the shipper's name, and, in any event, UP cannot prevent the shipper from sending the car or the line-haul railroad from starting the car on its way to UP. Moreover, even if UP embargoes the consignee, that does not stop the line-haul railroad from moving a car to an interchange with UP. And, as a practical matter, UP will have to accept the car.³¹ On occasion, when a problem has been severe and persistent, UP has convinced the line-haul railroad to cooperate in stemming the flow of traffic, but the railroad originating traffic generally lacks strong incentives to address congestion in another railroad's yards, especially when that means it would have to find space for those cars in its own yards. And UP prefers to resolve problems before they reach a stage that would justify an embargo.

CIMS has been a great success, and it plays an important ongoing role in helping to keep UP's network fluid. In July 2006, UP reported to the Board that in locations where CIMS had been implemented, which then covered about 60 percent of the movements to and from industry, dwell time had improved by 20 to 25 percent and switching reliability had improved by 35 to 50

³⁰ When UP handles traffic in interline service, we receive the same type of information as when we handle cars in local service because we have a relationship with the customer and also develop a transportation plan for the cars.

³¹ If the line-haul railroad has placed the car to the embargoed consignee in a consist with other cars to be interchanged, then it is not practicable for UP to attempt to cull out the car to the embargoed consignee from the other cars.

percent.³² By 2007, UP had implemented CIMS across its network. As of 2012, UP's overall average dwell time remains low, and our switching reliability was a record-high 95.2 percent. CIMS is currently playing an important role in helping UP manage the flow of traffic into its Southern Region, where demand for rail service has rapidly increased due to increases in the production of crude oil and natural gas. UP is responding to the growing demand by directing additional resources into the region, and customers have been cooperating with our requests that they control the flow of traffic into the region. UP is continuing to address the operating challenges to meet demand in the Southern Region, and CIMS is one of the tools we depend on to keep operations fluid.³³

Today, UP provides reciprocal switching at some destinations and thus cannot always make full use of CIMS. However, NITL's proposal would likely increase the amount of traffic that flows into UP's yards that UP cannot monitor and control using CIMS. NITL's proposal would thus reduce UP's ability to maintain fluid operations in its yards.

IV. OTHER IMPACTS OF NITL'S PROPOSAL ON THE RAIL NETWORK AND CUSTOMERS.

In its Notice, the Board invited parties to address the issue of pricing for forced reciprocal switching and the use of the 4-year average RSAM benchmark, rather than $R/VC_{\geq 240}$, as the basis for making a conclusive presumption of market dominance, and it also asked parties to quantify

³² See Letter from Jim Young, President & Chief Exec. Officer-UP to Hon. W. Douglas Buttrey, STB Chairman (July 17, 2006), *available at* [http://www.stb.dot.gov/PeakLetters1.nsf/99defb088828bb038525719c0061c528/5b272d6d0d881e9e852571b1004483e0/\\$FILE/UP%20-%20Fall%20Peak%20Planning%202006.pdf](http://www.stb.dot.gov/PeakLetters1.nsf/99defb088828bb038525719c0061c528/5b272d6d0d881e9e852571b1004483e0/$FILE/UP%20-%20Fall%20Peak%20Planning%202006.pdf).

³³ UP's current efforts to address the increased demand for railroad transportation in the Southern Region also illustrates one of the dangers associated with increased reciprocal switching that we describe on page 27: the danger that "surge capacity" resources UP uses to adjust to changes in market conditions or operating incidents would be consumed in addressing changes in transportation patterns brought about by regulatory intervention on behalf of a subset of shippers.