

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

Rail Fuel Surcharges (Safe Harbor)

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)

Docket No. EP 661 (Sub-No. 2)

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**COMMENTS OF THE WESTERN COAL TRAFFIC LEAGUE,
AMERICAN PUBLIC POWER ASSOCIATION, EDISON ELECTRIC
INSTITUTE, NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION,
SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION AND
CONSUMERS ENERGY COMPANY**

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Verified Statement of Thomas D. Crowley and Robert D. Mulholland

Verified Statement of Thomas E. Johnson

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CONSUMERS ENERGY COMPANY**

The Western Coal Traffic League (“WCTL”), American Public Power Association (“APPA”), Edison Electric Institute (“EEI”), National Rural Electric Cooperative Association (“NRECA”), South Mississippi Electric Power Association (“SMEPA”) and Consumers Energy Company (“Consumers”) (collectively “Allied Shippers”) file these Comments in response to the Surface Transportation Board’s (“STB” or “Board”) advance notice of proposed rulemaking (“ANPR”) served in this proceeding on May 29, 2014 and in support hereof state as follows:

PREFACE AND SUMMARY

The Board made two rulings in *Rail Fuel Surcharges III*¹ that it said benefited rail shippers: it held that carriers cannot use their fuel surcharges as profit centers and that carriers could, but were not required to, use Highway Diesel Fuel

¹ *Rail Fuel Surcharges*, STB Ex Parte No. 661 (STB served Jan. 26, 2007) (“*Rail Fuel Surcharges III*”).

(“HDF”) prices in their fuel surcharge tables. The Board characterized its HDF holding as a “safe harbor.”²

In its decision in *Cargill III*,³ the Board found that BNSF Railway Company (“BNSF”) had in fact used a fuel surcharge as a profit center because, over a five-year period (2006 to 2010), BNSF collected fuel surcharge revenues on its Agricultural (“Ag”) and Industrial Products traffic that exceeded the actual incremental fuel cost increases BNSF incurred in serving this traffic by over \$181 million.

However, the Board also held that if changed its incremental fuel cost analysis by substituting higher HDF-based prices that BNSF did not pay for the lower actual prices BNSF did pay, the \$181 million overcharge was wiped out. The Board concluded that its safe harbor ruling mandated that it use HDF prices in its incremental fuel cost analysis, and dismissed Cargill’s complaint.

Allied Shippers submit that *Cargill III* was wrongly decided. The Board somehow took two separate rulings in *Rail Fuel Surcharges III* it intended to benefit shippers – outlawing fuel surcharge profiteering and according safe harbor status to HDF – and combined them into a single ruling that permitted a carrier to do exactly what the Board said carriers could not do: deceptively use their fuel surcharges to collect millions in profits from their customers.

² *Id.*, slip op. at 11.

³ See *Cargill, Inc. v. BNSF Ry.*, Docket No. NOR 42120 (STB served Aug. 12, 2013) (“*Cargill III*”).

To its credit, the Board seeks to revisit the safe harbor in the ANPR. The Board's notice asks for comments on questions such as "whether or not the phenomenon that we observed in Cargill (a growing spread between a rail carrier's internal fuel costs and the HDF Index) was likely an aberration" and "whether the safe harbor provision of Fuel Surcharges should be modified or removed."⁴

The "spread" the Board refers to is not an "aberration" limited to the divergence between HDF and BNSF fuel prices between 2006 and 2010. Public data exists to make "spread" calculations for two carriers: BNSF and Union Pacific Railroad Company ("UP"). Allied Shippers' analysis of this data shows that in the last three years (2011 to 2013), the actual spread has consistently and significantly surpassed the implicit spread for both BNSF and UP and that the existence of the spread differential has resulted in BNSF collecting fuel surcharge profits of over \$593,000,000 and UP collecting fuel surcharge profits of over \$253,000,000.

The Board must eliminate the safe harbor because, as construed by the Board, it undermines the Board's principal objective in *Rail Fuel Surcharges III*: preventing the use of fuel surcharge programs as profit centers. The Board should also instruct carriers that if they choose to publish fuel surcharge tariffs, the tariffs must use changes in their actual fuel prices, not changes in surrogate prices. There simply is no reason to use unreliable and inaccurate surrogates when the carriers' accurate, actual fuel

⁴ ANPR, slip op. at 3.

price information is readily available and, if used, will avoid massive profiteering due to the use of inaccurate prices in carrier fuel surcharge tables.

Requiring carriers to use their actual fuel prices changes in their fuel surcharge tables is a step in the right direction because it will eliminate one form of unlawful fuel surcharge profiteering. But the Board needs to do more than fix the safe harbor spread issue if it is serious about preventing carriers from using their fuel surcharges as profit centers.

First, the Board needs to change its current policy limiting regulatory oversight of mileage-based fuel surcharges to shipper-initiated complaints. As discussed in detail below, the Board has thrown so many regulatory obstacles in shippers' way via its rulings in the only two (unsuccessful) shipper fuel surcharge complaints that it is unlikely that the Board will see any more complaints of this type, thus effectively deregulating any meaningful oversight of carrier mileage-based fuel surcharge programs.

Second, continued oversight is vital. The fuel consumption factors in carrier fuel surcharge tables have not been changed in a decade, even though the carriers are approximately 20% more fuel efficient today. Use of overstated consumption factors results in massive over-collections and huge profits. Allied Shippers' estimate that in 2013 alone, three major carriers' (BNSF, UP and CSX Transportation, Inc. ("CSXT")) use of overstated consumption factors resulted in their combined collection of over \$460,000,000 in unlawful surcharge profits from their customers. In addition, major carriers are most likely engaging in highly profitable double recovery practices – such as not aligning base rate fuel costs with fuel surcharge strike prices and applying indices

such as the All-Inclusive Index Less Fuel (“AIIILF”) to base rates that include a fuel cost component and are also subject to rail fuel surcharges.

Third, the necessary oversight must come from the Board. Allied Shippers propose that this oversight take the form of a Board requirement that any Class I carrier utilizing a mileage-based fuel surcharge provide annual certifications to the Board (along with supporting analyses) demonstrating (i) that their fuel surcharge tables are incorporating accurate fuel consumption factors, (ii) that carrier revenues under each fuel surcharge tariff are not exceeding the carrier’s actual incremental fuel costs incurred in providing service to the traffic group subject to the fuel surcharge tariff; and (iii) that the carrier is not engaged in any practices that permit double recovery of the same incremental fuel cost increases.

Fourth, if the Board decides not to regulate rail carrier fuel surcharge practices in the manner required to insure that they are not being used as profit centers, Allied Shippers propose that the Board order carriers to phase-out their permanent fuel surcharge tariffs. These tariffs were, and continue to be, a huge step backwards in the evolution of rail pricing. One of the principal purposes of the Staggers Act⁵ was to replace general fuel surcharge tariffs with a quarterly rate adjustment procedure that allowed full recovery of all carrier costs, including increased fuel costs. The Interstate Commerce Commission (“ICC” or “Commission”) responded by adopting the Rail Cost Adjustment Factor (“RCAF”), and the Board continues to publish that index.

⁵ Staggers Rail Act of 1980, Pub. L. No. 96-448, 94 Stat. 1895 (1980) (“Staggers Act”).

There simply is no need today for the use of fuel surcharge tariffs – particularly ones that are effectively screened from any meaningful regulatory oversight and, as the *Cargill* case graphically illustrates, are being used as profit centers – when carriers are free to adjust all of their rates using the Board-approved, and Board regulated, RCAF. The RCAF allows carriers to obtain a full recovery of all their operating costs, including their fuel costs, while at the same time insuring that the shipping public's interest in accurate cost recovery is protected through Board oversight and regulation.

IDENTITY AND INTEREST

WCTL is a voluntary association, whose regular membership consists entirely of shippers of coal mined west of the Mississippi River. WCTL members currently ship and receive in excess of 140 million tons of coal by rail each year. Many WCTL members pay fuel surcharges. These surcharges add millions of dollars annually to WCTL member freight bills, most of which end up being paid by electric utility consumers served by WCTL member companies. WCTL has been actively involved in many Board proceedings, including the prior proceedings in Ex Parte No. 661.

APPA is the national service organization representing the interests of over 2,000 municipal and other state- and locally-owned electric utilities in 49 states (all but Hawaii). Collectively, public power utilities deliver electricity to one of every seven electric consumers (approximately 46 million people), serving some of the nation's largest cities, but also many of its smallest towns. Over 40% of public power utilities generate power from coal.

The Edison Electric Institute (EEI) is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for 220 million Americans, operate in all 50 states and the District of Columbia, and directly employ more than 500,000 workers. With \$90 billion in annual capital expenditures, the electric power industry is responsible for millions of additional jobs. Reliable, affordable, and sustainable electricity powers the economy and enhances the lives of all Americans. EEI has 70 international electric companies as Affiliate Members, and 270 industry suppliers and related organizations as Associate Members. Organized in 1933, EEI provides public policy leadership, strategic business intelligence, and essential conferences and forums.

NRECA is the national service organization dedicated to representing the national interests of cooperative electric utilities and the consumers they serve. NRECA is the national service organization for more than 900 not-for-profit rural electric utilities that provide electric energy to over 42 million people in 47 states or 12% of electric customers. Kilowatt-hour sales by rural electric cooperatives account for approximately 11 percent of all electric energy sold in the United States. NRECA members generate approximately 50 percent of the electric energy they sell and purchase the remaining 50% from non-NRECA members. The vast majority of NRECA members are not-for profit, consumer-owned cooperatives. NRECA's members also include 65 generation and transmission (G&T) cooperatives, which generate and transmit power to 668 of the 838 distribution cooperatives. The G&Ts are owned by the distribution cooperatives they serve. Remaining distribution cooperatives receive power directly from other generation

sources within the electric utility sector. Both distribution and G&T cooperatives were formed to provide reliable electric service to their owner-members at the lowest reasonable cost.

SMEPA is a rural electric power association formed for the purposes of generating and transmitting electric energy. SMEPA is headquartered in Hattiesburg, Mississippi, and provides wholesale electric energy to eleven member-owners. The member-owners, in turn, are each rural electric distribution cooperatives which sell power through more than 417,000 meters to homes, farms, and businesses in 55 of the 82 counties in Mississippi. SMEPA owns and operates multiple generating stations, including an electric generating facility at Richburg, Mississippi known as the Morrow Station. This 400 MW facility consists of two coal-burning electric generating units. Rail transportation is the only economical means of delivering large volumes of coal to the Morrow Station, and rail access to the Morrow Station is exclusively over the lines of Norfolk Southern Railway Company (“NS”). As such, SMEPA is captive to NS, and SMEPA has no other current transportation option for delivering its coal purchases.

Consumers is an electric and gas utility company serving all 68 counties of Michigan’s Lower Peninsula. Consumers’ electric utility operations serve a mix of approximately 1.6 million residential, commercial and industrial customers, with the largest being the automotive industry. Principal cities served include Battle Creek, Flint, Grand Rapids, Jackson, Kalamazoo, Midland, Muskegon and Saginaw. Most of Consumers’ base load system capacity is comprised of coal-fired generation assets. These assets include the Karn-Weadock complex at Essexville, MI and the J.H. Campbell

Station near West Olive, MI. Rail shipments of Powder River Basin coal destined for Essexville and Campbell can originate on either BNSF or UP before interchange to other carriers – principally CSXT – for delivery. Fuel surcharges constitute a significant percentage of Consumers’ overall coal transportation expenses.

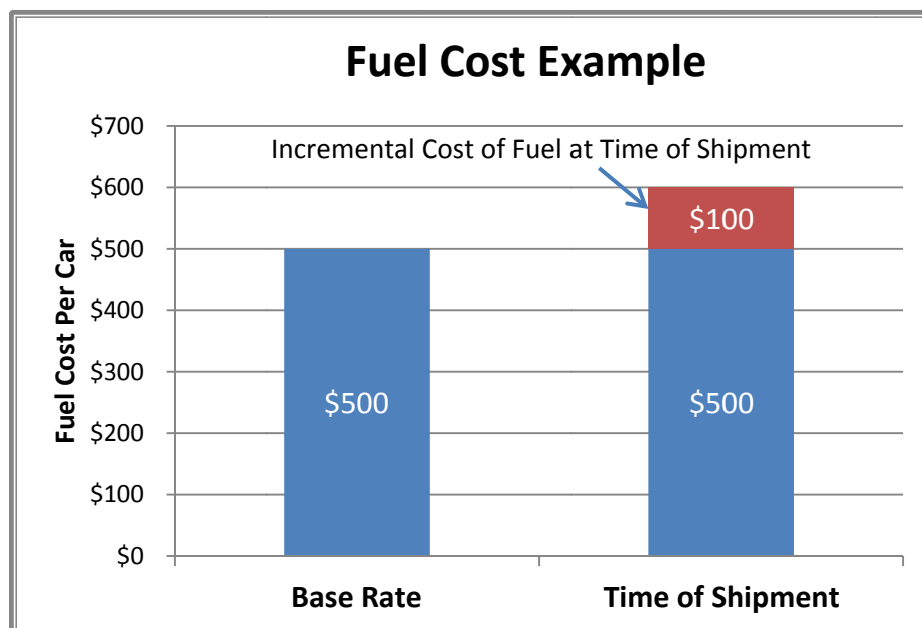
Allied Shippers have a substantial interest in this proceeding because either they, or members of their organizations, pay railroad fuel surcharges.

BACKGROUND

I. Fuel Surcharge Basics: Recovery of Incremental Fuel Cost Increases Not Included in Base Rates

This proceeding involves railroad fuel surcharges. The purpose of a rail fuel surcharge is to “recoup[] increased fuel costs that are not reflected in the base rate.”⁶

The following chart simply illustrates how a fuel surcharge is supposed to work:



⁶ *Rail Fuel Surcharges*, STB Ex Parte No. 661, slip op. at 4 (STB served Aug. 3, 2006) (“*Rail Fuel Surcharges II*”).

As shown in the above chart, the base rate incorporates a base fuel cost of \$500 per car. However, at the time the shipment moved, the fuel cost equaled \$600 per car. A properly calibrated fuel surcharge on this move would equal \$100 – an amount that “recoup[s the] increased fuel costs that are not reflected in the base rate.”⁷

There are two basic forms of rail fuel surcharges: percent-of-price and mileage-based. Under the percent-of-price approach, the carrier charges a fuel surcharge equal to a stated percentage of the shipper’s base rate. For example, if a shipper is paying a base rate of \$500 per car and the fuel surcharge percentage is 20%, the fuel surcharge is \$100 ($\$500 \times 20\%$), and the total or “all-in” price paid is \$600 ($\$500 + \100).

Under the mileage-based approach, the carrier charges a fuel surcharge equal to a stated amount per mile. For example, if a shipper is paying a base rate of \$500 per car, a car moved 1,000 miles and the fuel surcharge equaled \$0.10 per mile, the fuel surcharge would be \$100 ($1,000 \text{ miles} \times \0.10 per mile), and the total all-in price would equal \$600 ($\$500 + \100).

II. History of Rail Fuel Surcharges

A. Pre-1980: Fuel Surcharge Tariffs are Temporary and Permitted Only in Emergencies

Traditionally, railroads recovered their costs in their base rates, as well as through general rate increases. Surcharges to recover specific costs were disfavored because “it is not a sound and orderly ratemaking practice to isolate a single operating tax

⁷ *Id.*

from all other operating expenses, and maintain a surcharge based thereon.”⁸ Surcharges had “usually been resorted to only as an emergency and temporary means of obtaining revenue”⁹ and “only in instances where there was a compelling reason therefor and in no case as a permanent form of publication.”¹⁰

Fuel surcharges of any sort were largely unheard of until the run-up in diesel fuel prices precipitated by the OPEC Oil Embargo in 1973-74. Following the Embargo, the ICC permitted carriers to publish temporary fuel surcharge tariffs in cases where carriers demonstrated (i) their actual fuel costs were rising very rapidly due to unforeseen, and large, spikes in diesel fuel prices; (ii) they could not adequately recoup these increases in the absence of a special fuel surcharge; (iii) the fuel surcharge would not over-recover the carriers’ actual fuel cost increases; and (iv) the fuel surcharge would be temporary.¹¹

For example, in 1980, western railroads sought to publish a fuel surcharge tariff to apply for one year.¹² The ICC approved the railroads’ request based on its findings that (i) the railroads had “documented that between October 1, 1978 and

⁸ *Surcharges, New York State*, 62 M.C.C. 117, 133 (1953).

⁹ *Id.*

¹⁰ *Increases in Freight Rates & Charges to Offset Retirement Tax Increases – 1973*, 350 I.C.C. 673, 712 (1975).

¹¹ See generally *Effect of Modifying Proclamation No. 3279 & Other Anticipated Energy Conservation Measures on the Operation of Carriers Subject to the Interstate Commerce Act*, 350 I.C.C. 563 (1975) (commonly cited as Ex Parte No. 311, “*Expedited Procedures For Recovery of Fuel Costs*”).

¹² *Temp. Fuel Shortfall Recovery Surcharge, Apr. 11, 1980*, 364 I.C.C. 336 (1980).

September 30, 1979 they incurred increased fuel costs of \$178,922,017;”¹³ (ii) “[t]hese costs resulted in a revenue shortfall that has not been covered by any other rate adjustments;”¹⁴ (iii) “[i]f the fuel shortfall of \$178,922,017 is recovered before 1-year elapses, the temporary surcharge should be canceled;”¹⁵ and (iv) “[a]t no time should the temporary surcharge be incorporated into the general rate base.”¹⁶

As the 1970’s wound down, the ICC became increasingly concerned that the use of general rate increases, and generally applied temporary fuel surcharges, were “inherently inflexible and can never deal adequately with the complex task of pricing rail services.”¹⁷ The ICC believed that “the public will be better served by innovative and selective ratemaking than by continued primary dependence on general rate increases.”¹⁸ Congress responded to the ICC’s concerns in 1980.

B. 1980-2003: The RCAF Replaces Temporary Fuel Surcharge Tariffs

The Staggers Act, enacted by Congress in 1980, ushered in a new era of railroad pricing and railroad regulation. As pertinent here, Congress adopted a new rail

¹³ *Id.* at 338.

¹⁴ *Id.*

¹⁵ *Id.* at 340.

¹⁶ *Id.*

¹⁷ *Increased Rates and Charges, Nationwide – 1979*, 362 I.C.C. 153, 154 (1979).

¹⁸ *Id.* at 155.

transportation policy “requir[ing] rail carriers, to the maximum extent practicable, to rely on individual rate increases, and to limit the use of increases of general applicability.”¹⁹

To implement this policy, Congress directed the ICC, among other things, to promulgate an index that measured changes in railroad costs on a quarterly basis.²⁰ Carriers could then use the index to adjust rates without the need for general rate increases and temporary fuel surcharges. The ICC proceeded to develop a new quarterly rail cost index, commonly referred to as the RCAF, which it adopted in 1981.²¹

The ICC explained that its new index, when applied in concert with other provisions in the Staggers Act, “may well in itself be sufficient to ensure more complete cost recovery than has been possible under our existing general increase procedures”²² and would obviate the need for any separately published rail fuel surcharge tariffs:

[T]he procedures established in this decision will permit railroads to recover fuel cost increases along with other cost increases on a quarterly basis. Regulatory lag will be minimal Maintaining a separate surcharge mechanism for fuel would, in our view, serve no useful purpose once these rules are in place, and would, in fact, only complicate the operation of the new system. All parties will benefit from avoiding separate tariff supplements for fuel increases. Special permission 79-2620, which allows filing of fuel cost surcharges on short notice, will no longer be available to railroads.²³

¹⁹ Staggers Act § 101(a), 94 Stat. at 1897-98 (adding former 49 U.S.C. § 10101a(11)).

²⁰ Staggers Act § 203(a), 94 Stat. at 1901-02 (adding former 49 U.S.C. § 10707(a)(2)(B)).

²¹ See *Rail Cost Recovery Procedures*, 364 I.C.C. 841 (1981).

²² *Id.* at 851.

²³ *Id.* at 852.

The RCAF, as modified and refined in a series of decisions issued in the 1980's,²⁴ measures changes in railroad input prices including changes in the prices carriers pay for fuel. The fuel price component is based on carrier forecasts of their fuel prices in the next quarter.²⁵ The RCAF also contains a forecast error adjustment that trues up the forecasted fuel prices to the actual prices carriers' paid for fuel in the forecast quarter.²⁶ Forecast error adjustments (if any) are applied two quarters later. Thus, if the forecast fuel price was too high, or too low in any quarter, the RCAF forecast error process automatically corrects, or trues, the incorrect forecast two quarters later so that in the end the RCAF correctly captures the carriers' actual fuel price changes (up or down).²⁷

As Congress hoped, the ICC's adoption of the RCAF spelled the end of both railroad general rate increases, and rail fuel surcharge tariffs, as the principal means of adjusting rail rates. Instead, rail carriers relied on other mechanisms, such as

²⁴ See, e.g., *R.R. Cost Recovery Procedures*, 1 I.C.C.2d 207 (1984); *R.R. Cost Recovery Procedures*, 3 I.C.C.2d 60 (1986); *R.R. Cost Recovery Procedures – Productivity Adjustment*, 5 I.C.C.2d 434 (1989).

²⁵ See *R.R. Cost Recovery Procedures*, 1 I.C.C.2d at 207, 217 (“adoption of AAR’s [Ass’n of Am. R.R.’s] ‘all inclusive [D]’ index methodology for the calculation of the cost of diesel fuel consumed by railroads.”); AAR, Rail Cost Adjustment Factor (Updated Nov. 2001) at 4, available at https://www.aar.org/StatisticsAndPublications/Rail-Cost-Indexes/Documents/Index_RCAF_Description.pdf (“The fuel forecast is based on a consensus; projections of the fuel purchasing officers of the largest railroads, past, current, and futures prices of fuel, and forecasts presented in both specialized and general business publications are all taken into account.”).

²⁶ See *R.R. Cost Recovery Procedures*, 3 I.C.C.2d at 73-74.

²⁷ *Id.* at 74.

individual base rate increases, and application of the RCAF, to recover their fuel cost increases, both on common carrier traffic as well as on contract traffic.²⁸

C. 2003 to Date: Carriers Resurrect Fuel Surcharge Tariffs, This Time on a Permanent Basis

Starting in the early 2000's, all major carriers began publishing new permanent fuel surcharge tariffs.²⁹ Generally speaking, these tariffs contained percent-of-price fuel surcharges.³⁰ A representative example is a fuel surcharge tariff BNSF issued in May 2003,³¹ which had the following component parts:

- **Fuel Prices.** The tariff used changes in Retail HDF prices published by the United States Department of Energy's Energy Information Administration ("EIA") to develop fuel surcharges. EIA's HDF prices are retail prices paid by truckers, and others, for diesel fuel at the pump at various locations throughout the United States and are published monthly.
- **Strike Price/Fuel Surcharge Table.** The tariff contained a base, or strike, HDF price of \$1.25 per gallon, and the following table:

²⁸ See *Productivity Adjustment – Implementation*, 1 S.T.B. 739, 746 (1996) (noting the use of the RCAF as “a benchmark for contracts”).

²⁹ See *In re Rail Freight Surcharge Antitrust Litig. – MDL No. 1869*, 725 F.3d 244, 248 (D.C. Cir. 2013) (noting that “by the mid-2000s...fuel surcharge provisions became ubiquitous”).

³⁰ See *id.*

³¹ BNSF Rules Book 6100-A, Item 3375C (Issued May 7, 2003, Effective June 1, 2003).

BNSF Fuel Surcharge Table	
<u>Time Periods Average Price of HDF Between</u>	<u>Applicable Fuel Surcharge</u>
\$1.25 to \$1.299	0.5%
\$1.30 to \$1.349	1.0%
\$1.35 to \$1.399	1.5%
\$1.40 to \$1.449	2.0%
\$1.45 to \$1.499	2.5%
\$1.50 to \$1.549	3.0%
\$1.55 to \$1.599	3.5%
\$1.60 to \$1.649	4.0%
\$1.65 to \$1.699	4.5%
\$1.70 to \$1.749	5.0%
\$1.75 to \$1.799	5.5%
\$1.80 to \$1.849	6.0%
\$1.85 to \$1.899	6.5%
\$1.90 to \$1.949	7.0%
Each \$0.05 per gallon increase thereafter, apply an additional 0.5%.	

- Fuel Surcharge Calculation.** The tariff called for BNSF to identify the HDF price in effect two months before the shipment subject to the tariff moved. For example if the shipment moved in July 2004, the governing HDF price for purpose of applying BNSF's fuel surcharge table was May 2004. Continuing the example, if the May 2004 HDF price equaled \$1.556 per gallon, the applicable fuel surcharge was an amount equal to the total shipment freight charges multiplied by 3.5%.

In 2006, BNSF was the first major carrier to supplement its percent-of-price fuel surcharge tariffs with two "mileage-based" fuel surcharge tariffs, one applicable to coal traffic³² and the second applicable to specified non-coal traffic.³³ The non-coal tariff provided in pertinent part:

³² BNSF Rules Book 6100-A, Item 3381 (Issued Nov. 16, 2005, Effective Jan. 1, 2006).

³³ BNSF Rules Book 6100-A, Item 3375E, Section B (Issued Nov. 16, 2005, Effective January 1, 2006).

- **Fuel Prices.** The tariff used changes in HDF prices to develop fuel surcharges.
- **Strike Price/Fuel Surcharge Table.** The tariff contained a base, or strike, HDF price of \$1.25 per gallon, and the following table:

BNSF Non-Coal Fuel Surcharge Table			
<u>Time Periods Average</u>	<u>Fuel Surcharge</u>	<u>Time Periods Average</u>	<u>Fuel Surcharge</u>
<u>Price of HDF Between</u>	<u>Cents per Mile</u>	<u>Price of HDF Between</u>	<u>Cents per Mile</u>
\$0.00 to \$1.249	0.00	\$2.13 to \$2.169	0.23
\$1.25 to \$1.289	0.01	\$2.17 to \$2.209	0.24
\$1.29 to \$1.329	0.02	\$2.21 to \$2.249	0.25
\$1.33 to \$1.369	0.03	\$2.25 to \$2.289	0.26
\$1.37 to \$1.409	0.04	\$2.29 to \$2.329	0.27
\$1.41 to \$1.449	0.05	\$2.33 to \$2.369	0.28
\$1.45 to \$1.489	0.06	\$2.37 to \$2.409	0.29
\$1.49 to \$1.529	0.07	\$2.41 to \$2.449	0.30
\$1.53 to \$1.569	0.08	\$2.45 to \$2.489	0.31
\$1.57 to \$1.609	0.09	\$2.49 to \$2.529	0.32
\$1.61 to \$1.649	0.10	\$2.53 to \$2.569	0.33
\$1.65 to \$1.689	0.11	\$2.57 to \$2.609	0.34
\$1.69 to \$1.729	0.12	\$2.61 to \$2.649	0.35
\$1.73 to \$1.769	0.13	\$2.65 to \$2.689	0.36
\$1.77 to \$1.809	0.14	\$2.69 to \$2.729	0.37
\$1.81 to \$1.849	0.15	\$2.73 to \$2.769	0.38
\$1.85 to \$1.889	0.16	\$2.77 to \$2.809	0.39
\$1.89 to \$1.929	0.17	\$2.81 to \$2.849	0.40
\$1.93 to \$1.969	0.18	\$2.85 to \$2.889	0.41
\$1.97 to \$2.009	0.19	\$2.89 to \$2.929	0.42
\$2.01 to \$2.049	0.20	\$2.93 to \$2.969	0.43
\$2.05 to \$2.089	0.21	\$2.97 to \$3.009	0.44
\$2.09 to \$2.129	0.22	\$3.01 to \$3.049	0.45

Each \$0.04 per gallon increase thereafter, apply an additional \$0.01 per mile.

- **Fuel Surcharge Calculation.** The tariff called for BNSF to identify the HDF price in effect two months before the shipment subject to the tariff moved. For example if the shipment moved in July 2006, the governing HDF price for purpose of applying BNSF's fuel surcharge table was May 2006. Continuing the example, if the May 2004 HDF price equaled \$1.556 per gallon, the applicable fuel surcharge was an amount equal to the total shipment freight charges multiplied by \$0.08 per loaded car-mile.

BNSF's mileage-based fuel surcharge tariff for coal movements had the same terms, with one exception: it tied fuel surcharges to \$0.06 per gallon changes in HDF prices, not \$0.04 per gallon changes:

BNSF Coal Fuel Surcharge Table			
<u>Time Periods Average Price of HDF Between</u>	<u>Fuel Surcharge Cents per Mile</u>	<u>Time Periods Average Price of HDF Between</u>	<u>Fuel Surcharge Cents per Mile</u>
\$0.00 to \$1.249	0.00	\$2.15 to \$2.209	0.16
\$1.25 to \$1.309	0.01	\$2.21 to \$2.269	0.17
\$1.31 to \$1.369	0.02	\$2.27 to \$2.329	0.18
\$1.37 to \$1.429	0.03	\$2.33 to \$2.389	0.19
\$1.43 to \$1.489	0.04	\$2.39 to \$2.449	0.20
\$1.49 to \$1.549	0.05	\$2.45 to \$2.509	0.21
\$1.55 to \$1.609	0.06	\$2.51 to \$2.569	0.22
\$1.61 to \$1.669	0.07	\$2.57 to \$2.629	0.23
\$1.67 to \$1.729	0.08	\$2.63 to \$2.689	0.24
\$1.73 to \$1.789	0.09	\$2.69 to \$2.749	0.25
\$1.79 to \$1.849	0.10	\$2.75 to \$2.809	0.26
\$1.85 to \$1.909	0.11	\$2.81 to \$2.869	0.27
\$1.91 to \$1.969	0.12	\$2.87 to \$2.929	0.28
\$1.97 to \$2.029	0.13	\$2.93 to \$2.989	0.29
\$2.03 to \$2.089	0.14	\$2.99 to \$3.049	0.30
\$2.09 to \$2.149	0.15	\$3.05 to \$3.109	0.31

Each \$0.06 per gallon increase thereafter, apply an additional \$0.01 per mile.

In conjunction with their publication of permanent fuel surcharge tariffs, the major carriers uniformly took steps to apply the new permanent fuel surcharges to all of their traffic.³⁴ Unlike the case prior to 1980, none of these new fuel surcharge tariffs was subject to any advance review or approval by the Board.

These actions met with strong resistance from shippers, and shipper's elected representatives, all of whom expressed the same over-riding concern: carriers

³⁴ See *In re Rail Freight Fuel Surcharge Antitrust Litigation*, 287 F.R.D. 1, 48-49 (D.D.C. 2012) (starting in 2003, the four largest railroads "uniformly applied [fuel surcharges] across all or virtually all shippers") *vacated and remanded in part on other grounds by In re Rail Freight Surcharge Antitrust Litigation – MDL No. 1869*, 725 F.3d 244 (D.C. Cir. 2013).

were using their new fuel surcharges to over-recover their actual incremental fuel cost increases.³⁵ Stated another way, shippers, and their elected representatives, were concerned that railroads were using their new permanent fuel surcharge as “profit center[s].”³⁶ Many shippers, including WCTL, also questioned the need for separate fuel surcharges since the Board’s predecessor, the ICC, had developed the RCAF as a reasonable and superior approach to the publication of fuel surcharge tariffs.

D. The Board Rules that Permanent Fuel Surcharge Tariffs Cannot Lawfully Be Used as Profit Centers

1. Rail Fuel Surcharges (2006-2007)

In March 2006, the Board instituted a proceeding to address these concerns. The proceeding was denominated Ex Parte No. 661, *Rail Fuel Surcharges*.³⁷ In the ensuing proceedings, the shippers asked the Board to find that it was an unreasonable practice for carriers to use their fuel surcharges as profit centers. The major railroads disagreed. Their shared position was that they were free to use their fuel surcharge programs as profit centers because, they contended, the STB had no jurisdiction to regulate their fuel surcharge practices.³⁸

³⁵ See *Rail Fuel Surcharges*, Ex Parte No. 661, slip op. at 1 (STB served Mar. 14, 2006) (“*Rail Fuel Surcharges I*”) (observing that “the rail shipper community has voiced concerns that recent fuel surcharges collected by railroads are designed to recover amounts over and above increased fuel costs.”).

³⁶ See *Rail Fuel Surcharges*, Ex Parte No. 661, slip op. at 2 (STB served Aug. 3, 2006) (“*Rail Fuel Surcharges II*”).

³⁷ See *Rail Fuel Surcharges I*.

³⁸ *Rail Fuel Surcharges III*, slip op. at 7-8.

The Board rejected the railroads' position. In its final decision in *Rail Fuel Surcharges III*, served in January 2007, the Board held that use of fuel surcharges for “revenue enhancement measure[s]” was “a misleading and ultimately unreasonable practice.”

[T]he term “fuel surcharge” most naturally suggests a charge to recover increased fuel costs associated with the movement to which it is applied. If it is used instead as a broader revenue enhancement measure, it is mislabeled. . . . We believe that imposing rate increases in this manner, when there is no real correlation between the rate increase and the increase in fuel costs for that particular movement to which the surcharge is applied, is a misleading and ultimately unreasonable practice.³⁹

The Board applied this general principal – carriers cannot use fuel surcharges as profit centers – to prospectively ban two fuel surcharge practices: the use of percent-of-price fuel surcharges⁴⁰ and “‘double dipping,’ i.e., double recovery of the same fuel cost increase[s]”⁴¹ by “applying to the same traffic both a fuel surcharge and a rate increase that is based on a cost index that includes a fuel cost component, such as the . . . RCAF”⁴²

The Board also held that shippers would benefit if “railroads apply a single, uniform index to measure changes in fuel prices”⁴³ in their fuel surcharge tables because use of such an index would “enhance the credibility of fuel surcharges in the eyes of

³⁹ *Id.*, slip op. at 7.

⁴⁰ *Id.*, slip op. at 1.

⁴¹ *Id.*, slip op. at 10.

⁴² *Id.*, slip op. at 1.

⁴³ *Id.*, slip op. at 11.

those who pay them”⁴⁴ and found that a suitable index for this purpose was the “EIA Index” of published HDF prices.⁴⁵ The Board “encourage[d] carriers to use the EIA Index”⁴⁶ but did “not mandate its use.”⁴⁷ Instead, the Board afforded what it characterized as “safe harbor” status to a carrier’s use of the EIA Index:

[W]e conclude that . . . [the EIA Index] is a reasonable index to apply to measure changes in fuel costs for purposes of a fuel surcharge program. Thus, it provides a “safe harbor” upon which carriers can rely for an index. Use of an alternative index may be subject to challenge.⁴⁸

Finally, the Board held that if shippers wanted to obtain any additional fuel surcharge relief, they could file an unreasonable practice complaint with the Board.⁴⁹ Shortly thereafter, the Board informed Congress that it would “aggressively use the authority granted to us by statute to stop unreasonable [fuel surcharge] practices”⁵⁰ and would “expeditiously review any formal complaints related to fuel surcharges.”⁵¹ Unfortunately, the Board’s promise to “aggressively” respond to unreasonable fuel

⁴⁴ *Id.* The “EIA Index” the Board referred to was the “‘U.S. No. 2 Diesel Retail Sales by All Sellers (Cents Per Gallon)’” published by the Energy Information Agency, an independent arm of the Department of Energy.” *Id.* at 2. This was the same index many carriers were already using in their fuel surcharge tables.

⁴⁵ *Id.*, slip op. at 2, 14 (Vice Chairman Buttrey, concurring in part and dissenting in part).

⁴⁶ *Id.*, slip op. at 11.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*, slip op. at 10.

⁵⁰ *Rail Competition & Serv.: Hearing Before the H. Comm. on Transp. & Infrastructure*, 110th Cong. 23 (2007) (test. of then-STB Chairman Nottingham).

⁵¹ *Id.*

surcharge complaints, and to review such complaints “expeditiously” did not come to pass.

2. *Dairyland v. UP (2008)*

The first shipper to take up the Board’s invitation to file an unreasonable fuel practice complaint was Dairyland Power Cooperative (“Dairyland”), a small not-for-profit generation and transmission utility based in La Crosse, Wisconsin. In March 2008, Dairyland filed a complaint alleging that UP was engaged in an unreasonable practice by collecting fuel surcharge revenues on Dairyland’s coal traffic that substantially exceeded the actual incremental fuel costs UP was incurring in providing service to Dairyland, *i.e.*, that UP was unlawfully using its fuel surcharge as a profit center.⁵²

UP moved to dismiss Dairyland’s complaint and, in response to that motion, the Board ruled that to prove its case, Dairyland would have to demonstrate that UP was using its fuel surcharge to over-recover fuel surcharge revenues not just on Dairyland’s traffic, but all other coal traffic subject to the assailed UP fuel surcharges.⁵³ The Board’s ruling imposed massive new proof burdens on a small cooperative, and the case settled shortly thereafter.⁵⁴

⁵² *Dairyland Power Coop. v. Union Pac. R.R.*, STB Docket No. 42105, slip op. at 2-3, 5 (STB served July 29, 2008).

⁵³ *Id.*, slip op. at 5-6.

⁵⁴ *See Dairyland Power Coop. v. Union Pac. R.R.*, STB Docket No. 42105 (STB served Dec. 12, 2008).

3. *Cargill v. BNSF (2010-2013)*

The second shipper to take up the Board's invitation was Cargill, Incorporated ("Cargill"). Cargill is a large shipper of Agricultural ("Ag") and Industrial products. Cargill filed a three count complaint in April 2010 alleging that (i) BNSF was collecting mileage-based fuel surcharges on all its Ag and Industrial traffic that substantially exceeded its actual incremental fuel cost increases on this traffic ("Profit Center" claim); (ii) BNSF's tariff fuel surcharge methodology bore no reasonable nexus to, and overstated, BNSF's fuel consumption ("Reasonable Nexus" claim); and (iii) BNSF was engaged in two impermissible "double recovery" practices: applying rate adjustments to 100% of movement base rates while also imposing fuel surcharges on the same movements and establishing base rates that included fuel costs set using higher fuel prices than those assumed in the fuel surcharge tariffs ("Double Recovery" claim).

Cargill's complaint sought both damages and prescriptive relief. Cargill's case took nearly three and one-half years to litigate and Cargill obtained none of the relief it sought:

- **Preliminary/Procedural Rulings.** Over Cargill's objections, the Board dismissed Cargill's Double Recovery claim on grounds that the claim failed to state a cognizable cause of action;⁵⁵ bi-furcated the case into two phases: liability and damages⁵⁶ (eventually deciding only the liability phase); and ruled that Cargill would

⁵⁵ *Cargill Inc. v. BNSF Ry.*, Docket No. NOR 42120, slip op. at 6 (STB served Jan. 4, 2011) ("*Cargill I*").

⁵⁶ *Cargill, Inc. v. BNSF Ry.*, Docket No. NOR 42120, slip op. at 3 (STB served Apr. 8, 2011) ("*Cargill II*").

have to file a new complaint to address overcharges incurred on shipments moving under a rebased version of the challenged tariff which BNSF promulgated while Cargill's case was pending.⁵⁷

- **Profit Center Claim.** To meet its profit-center claim burden of proof, Cargill calculated the fuel surcharge revenues, and corresponding actual incremental fuel costs, on over 5,600,000 cars subject to the assailed fuel surcharge traffic moving over a five-year period (2006 to 2010).⁵⁸ Cargill's evidence showed that BNSF was using the assailed fuel surcharge as a profit center because BNSF had collected fuel surcharge revenues under the challenged fuel surcharge tariff during the five-year analysis period that were substantially higher than the actual incremental fuel costs BNSF had incurred in providing service to the traffic group subject to the fuel surcharge tariff over the five-year analysis period.⁵⁹

BNSF disputed many of Cargill's incremental fuel cost calculations, but its own restatement of Cargill's cost study showed that BNSF was using its fuel surcharge as a profit center.⁶⁰ However, BNSF argued that if higher HDF prices were substituted in the incremental cost analysis for the lower actual fuel prices BNSF actually paid, its fuel surcharge revenues over the five-year analysis period were less than its incremental fuel

⁵⁷ *Cargill III*, slip op. at 4 n.5.

⁵⁸ *See id.*, slip op. at 7.

⁵⁹ *See Cargill, Inc. v. BNSF Ry.*, Docket No. NOR 42120, Opening Statement of Cargill, Inc. at 22-23 (filed Aug. 25, 2011) ("Cargill Opening").

⁶⁰ *See Cargill, Inc. v. BNSF Ry.*, Docket No. NOR 42120, Reply Evidence and Arg. of BNSF Ry. Co. at 56 (filed Oct. 24, 2011) ("BNSF Cargill Reply").

cost increases (calculated using HDF prices).⁶¹ BNSF also argued that substitution of HDF prices it did not pay, for the actual prices it did pay, was permissible pursuant to the Board's safe harbor ruling in *Fuel Surcharges III*,⁶² and, with this substitution, Cargill's Profit Center claim should be dismissed because BNSF's fuel surcharge revenues were less than its incremental fuel cost increases (calculated using HDF).⁶³

The Board's resolution of Cargill's Profit Center claim is quite difficult to follow, but the gist of it appears to be that the Board utilized Cargill's approach of comparing fuel surcharge revenues to BNSF's actual incremental fuel costs over a five-year period;⁶⁴ accepted BNSF's calculation of BNSF's actual incremental fuel cost increases;⁶⁵ and determined that the difference between BNSF's surcharge collections on the traffic subject to the challenged fuel surcharge tariff and BNSF's actual incremental fuel costs over the five-year analysis period, equaled approximately \$181 million.⁶⁶ Thus, using BNSF's actual incremental fuel costs (as determined by the Board), the Board found that BNSF had over-charged its Ag and Industrial shippers by some \$181 million.

However, the Board accepted BNSF's contention that the Board should not use the prices BNSF actually paid for fuel in the incremental cost analysis, but, instead

⁶¹ *Id.* at 58.

⁶² *Id.* at 60.

⁶³ *Id.* at 62.

⁶⁴ *Id.*, slip op. at 7.

⁶⁵ *Id.*, slip op. at 11-13.

⁶⁶ *Id.*, slip op. at 14.

should substitute HDF prices that BNSF did not pay.⁶⁷ The Board found that by substituting prices BNSF did not pay (HDF prices) for diesel fuel prices BNSF did pay (actual prices), the \$181 million overcharge was wiped out, and BNSF slightly under-recovered its “total incremental fuel costs as measured by the HDF Index.”⁶⁸

The Board also agreed with BNSF that the use of HDF prices to determine BNSF’s actual incremental fuel costs was a permissible interpretation of the Board’s “safe harbor” ruling in *Rail Fuel Surcharges III*: “what the safe harbor means is that if a rail carrier uses the HDF Index to measure changes in its fuel costs, then that is how the Board will measure these changes as well, rather than by looking at evidence of changes in the rail carrier’s internal fuel costs.”⁶⁹

- **Reasonable Nexus Claim.** The fuel surcharge tariff at issue in Cargill called for BNSF to apply a one cent per loaded car-mile fuel surcharge for every four cent increase in HDF prices above a \$1.25 per gallon strike price.⁷⁰ BNSF maintained that the challenged tariff’s 1:4 step function was predicated on studies BNSF had prepared in June 2005, using calendar year 2004 data, showing that BNSF consumed fuel on average of 4 miles per gallon (“MPG”) on traffic that would be subject to the challenged fuel surcharge.⁷¹

⁶⁷ *Id.*, slip op. at 13.

⁶⁸ *Id.*

⁶⁹ *Id.*, slip op. at 9.

⁷⁰ *Id.*, slip op. at 4.

⁷¹ *Id.*, slip op. at 14-15.

The Board rejected Cargill's arguments that the 4 MPG assumption was too low. The Board found that BNSF had engaged in "a careful process"⁷² in 2004/2005 to calculate the 4 MPG consumption factor and that BNSF's interests in "simplicity and ease of administration" permitted BNSF to round down higher MPG figures to 4 MPG.⁷³

- **Safe Harbor Concerns.** The Board said that "[t]his proceeding has raised concerns about the safe harbor" because, as interpreted by the Board, "the safe harbor can allow a rail carrier to recover more than its incremental fuel costs as measured by the carrier's internal fuel costs" in cases "where changes in the HDF Index fail to accurately reflect changes in a rail carrier's internal fuel costs, as happened here."⁷⁴ The Board stated that it did not know whether the "spread" between HDF prices and actual fuel prices which occurred in Cargill "was a unique situation affecting only BNSF during this period of high volatility in fuel prices or whether it is, or is likely to be, a more widespread phenomenon that may undermine the usefulness of the current safe harbor provision."⁷⁵

The Board also expressed concerns that its interpretation of the safe harbor "provides rail carriers with an unintended advantage" because "[i]f a rail carrier's internal fuel costs rise relative to HDF Index prices, the rail carrier can revise its fuel surcharge

⁷² *Id.* at 14.

⁷³ *Id.* at 16.

⁷⁴ *Id.* at 17.

⁷⁵ *Id.*

program to ensure that it fully recovers its incremental internal fuel costs.”⁷⁶ But “if a rail carrier’s internal fuel costs decline relative to HDF Index prices (as happened here during the five-year period), the rail carrier need not revise its fuel surcharge program,” a result that “would allow the rail carrier to recover more than its incremental internal fuel costs [because] [] the safe harbor effectively would immunize that over-recovery from scrutiny.”⁷⁷

The Board concluded that it planned to “issue an advanced notice of proposed rulemaking to give shippers, rail carriers and other interested parties the opportunity to comment on the safe harbor, including whether it should be modified or removed.”⁷⁸

4. The ANPR (2014)

On May 29, 2014, the Board issued the ANPR in this proceeding. In the ANPR, the Board asks for comments on the following issues:

- “whether or not the phenomenon that we observed in Cargill (a growing spread between a rail carrier’s internal fuel costs and the HDF index) was likely an aberration;”
- “whether there are problems associated with the Board’s use of the HDF index as a safe harbor in judging the reasonableness of fuel surcharge programs;”
- “whether any problems with the safe harbor could be addressed through a modification of it;”
- “whether any problems with the safe harbor are outweighed by its benefits;” and

⁷⁶ *Id.*

⁷⁷ *Id.*

⁷⁸ *Id.* at 17-18.

“any other matter that [commenters] believe bears on whether the safe harbor should be modified or removed.”⁷⁹

ARGUMENT

The Board’s ANPR is directed at “safe harbor” issues. The safe harbor does not work and, indeed, as the *Cargill* case illustrates, undermines the entire purpose of *Rail Fuel Surcharges III*: eliminating practices that permit rail carriers to use their fuel surcharges as profit centers. The *Cargill* case teaches that any viable fuel surcharge procedure must be based on changes in the prices carriers actually pay for fuel, not on surrogate prices the carriers do not pay.

While Allied Shippers appreciate the fact that the Board is revisiting safe harbor issues, Allied Shippers request that the Board use this APRM to address broader issues. In *Rail Fuel Surcharges III*, the Board directed that shippers bring any challenges to mileage-based fuel surcharge programs on a case-by-case basis. In effect, the Board left policing of these carrier fuel surcharge programs – *i.e.*, whether they are being misused as profit centers – to individual shipper complaints.

However, the Board’s rulings in *Dairyland* and *Cargill* make it virtually impossible for shippers to pursue individual cases. The Board needs to substantially revamp how it regulates individual fuel surcharge programs, or order carriers to phase-out the use of fuel surcharges altogether.

⁷⁹ ANPR, slip op. at 3.

I. ANY PERMISSIBLE RAIL FUEL SURCHARGE PROGRAM MUST BE BASED ON THE ACTUAL PRICES RAILROADS PAY FOR FUEL - NOT INACCURATE SURROGATE PRICES

A. The Principal Purpose of *Rail Fuel Surcharges* was to Protect Shippers by Precluding Carriers from Using Fuel Surcharges as Profit Centers

The Board instituted the *Rail Fuel Surcharges* proceeding in March 2006 to address “widely voiced public concerns”⁸⁰ that “recent fuel surcharges collected by railroads are designed to recover amounts over and above increased fuel costs.”⁸¹

In the ensuing proceedings before the Board, shippers and government officials uniformly took the position that fuel surcharges should be limited to cost recovery only, and not be used as profit centers:

- **Vice Chairman Mulvey:** “the railroads run into problems with their shippers when the surcharges appear to be profit centers, rather than cost recovery mechanisms, and when there is a lack of clear correlation to increases in the cost of fuel actually paid by the railroads and actually used for particular movements.”⁸²
- **Montana Governor Schweitzer:** “Are fuel surcharges that recover more than the system-wide fuel cost increases incurred by the railroad [a] reasonable carrier practice? No.”⁸³
- **Senator Dorgan:** “I have heard from many North Dakota shippers who believe, as I do, that there does not appear to have been any relationship between the amount of the surcharge imposed and the actual increase in fuel

⁸⁰ *Rail Fuel Surcharges II*, slip op. at 1.

⁸¹ *Rail Fuel Surcharges I*, slip op. at 1.

⁸² *Rail Fuel Surcharges*, Ex Parte No. 661, Public Hearing (May 11, 2006), Tr. at 13 (May 11, 2006) (“*Rail Fuel Surcharges Hearing*”).

⁸³ *Id.* at 27.

costs for a particular shipment. That is not appropriate, and it is not fair.”⁸⁴

- **Senator Burns:** “[I]t is the practice of charging *more* than the increase in fuel costs that truly amounts to an unreasonable practice. By charging shippers more than the increase in fuel costs, the Class I railroads are simply adding to the bottom line and imposing new rate hikes on customers, not covering unexpected increases in operating expenses.”⁸⁵
- **United States Department of Agriculture:** “USDA asserts that railroad fuel surcharges should closely approximate the actual added fuel costs caused by increased fuel prices; they should not be allowed to become a profit center or a means of hiding increases in tariff rates.”⁸⁶
- **National Grain and Feed Association:** “A fuel surcharge has never been necessary and would not be necessary today except to recover fuel costs that are not anticipated at the time the freight rate is established. If the railroad uses fuel surcharges for some other purpose, it is an unreasonable practice.”⁸⁷
- **North Dakota Grain Dealers Association:** “We believe assessing more fuel surcharge than actual increased fuel expense is an unreasonable practice.”⁸⁸
- **Wheat/Barley Commissions:** “if the fuel surcharges are being used for over collection or additional profit, the railroads probably have been misleading their customers. . . . To the extent that the railroad uses a fuel surcharge for some purpose other than [cost recovery], it becomes

⁸⁴ *Rail Fuel Surcharges*, Ex Parte No. 661, Comments of U.S. Sen. Byron Dorgan at 1 (filed May 2, 2006).

⁸⁵ *Rail Fuel Surcharges*, Ex Parte No. 661, Letter from U.S. Sen. Burns to STB Chairman Buttrey at 1 (filed May 8, 2006) (emphasis in original).

⁸⁶ *Rail Fuel Surcharges*, Ex Parte No. 661, Comments of the U.S. Dep’t of Agric. at 5 (filed April 26, 2006).

⁸⁷ *Rail Fuel Surcharges Hearing* at 43 (test. of Dan Mack on behalf of the Nat’l Grain & Feed Ass’n).

⁸⁸ *Id.* at 53 (test. of Steve Strege on behalf of the N.D. Grain Dealers Ass’n).

an additional profit center and that clearly is an unreasonable practice.”⁸⁹

- **Western Coal Traffic League:** “UP and BNSF fuel surcharge programs bear no reasonable relationship to their involved service costs to individual customers. And they should not be allowed to be sustained in their current form.”⁹⁰
- **Concerned Captive Coal Shippers:** “railroads’ current fuel surcharge mechanisms constitute unreasonable practices because they fail to limit surcharge revenues on individual movements to levels that are directly and closely correlated to changes in the cost of fuel for such movements.”⁹¹
- **Entergy Services, Inc.:** “Fuel surcharge mechanisms should be strictly cost-based and should not increase the railroad’s profitability to the movement to which they apply.”⁹²
- **Alliance of Automobile Manufacturers:** “Surcharges should cover only the increased cost of fuel and not be a new source of profit for the railroads.”⁹³
- **National Industrial Traffic League:** “a proper fuel surcharge program . . . would relate to the actual changes in fuel costs incurred to transport or ship the goods. It would not be revenue generating.”⁹⁴

⁸⁹ *Id.* at 61-62 (test. of Terry Whiteside on behalf of Mont. Wheat & Barley Comm., Colo. Wheat Admin. Comm., Idaho Barley, Idaho Wheat, Neb. Wheat Bd., the Okla. Wheat, S.D. Wheat Comm’n, the Tex. Wheat Producers & the Nat’l Ass’n of Wheat Growers).

⁹⁰ *Id.* at 88 (test. of Peter Pfohl on behalf of WCTL).

⁹¹ *Rail Fuel Surcharges*, Ex Parte No. 661, Comments of Concerned Captive Coal Shippers at 2 (Oct. 2, 2006).

⁹² *Rail Fuel Surcharges Hearing* at 95 (test. of Bill Mohl on behalf of Entergy Servs., Inc.).

⁹³ *Id.* at 121 (test. of George Telfer on behalf of the Alliance of Auto. Mfrs.).

⁹⁴ *Id.* at 218 (test. of Curt Warfel on behalf of the Nat’l Indus. Transp. League).

- **American Chemistry Council:** “ACC has no quarrel with the concept of fuel cost recovery, but it clearly has to be related to what the cost of fuel is.”⁹⁵
- **Steel Manufacturers Association:** “Surcharges should be used only to recover expenses, not as a mechanism to generate revenue.”⁹⁶

The Board agreed with shippers. Over the strident objections of the railroad industry, the Board held in *Rail Fuel Surcharges III* that carriers could not lawfully use their fuel surcharges as profit centers:

[O]ur authority to proscribe unreasonable practices embraces misrepresentations or misleading conduct by the carriers. And the record in this proceeding provides extensive testimony by shippers who have expressed concern about carriers raising their rates on the pretext of recovering increased fuel costs. If the railroads wish to raise their rates they may do so, subject to the rate reasonableness requirement of the statute, but they may not impose those increases on their customers on the basis of a misrepresentation.⁹⁷

The Board subsequently reaffirmed this holding in its 2008 decision in

Dairyland:

We explained [in *Rail Fuel Surcharges III*] that the term “fuel surcharge” most naturally suggests a charge to recover increased fuel costs associated with the movement to which it is applied. Id. at 6-7. If a “fuel surcharge” is used as a broader revenue enhancement measure, it is mislabeled. Id. at 7. In other words, if there is no “real correlation” between the surcharge and the increase in fuel costs for the particular movement to which the

⁹⁵ *Id.* at 233 (test. of Tom Schick on behalf of the Am. Chemistry Council).

⁹⁶ *Rail Fuel Surcharges*, Ex Parte No. 661, Letter from Thomas Danjczek, President of the Steel Mfrs. Assoc. to STB Chairman Buttrey at 1 (filed Apr. 27, 2006).

⁹⁷ *Rail Fuel Surcharges III*, slip op. at 7.

surcharge is applied, then it is a misleading and ultimately unreasonable practice.⁹⁸

And, the Board adhered to this ruling in *Cargill I*:

[In the *Rail Fuel Surcharges III* decision,] [t]he Board explained that, consistent with the rail transportation policy “to encourage honest and efficient management of railroads,” 49 U.S.C. § 10101(9), its new rules were “only addressing the manner in which railroads apply what they label a fuel surcharge.” Fuel Surcharges, at 7. The Board reemphasized that it was not limiting the total rate rail carriers could charge and that, if carriers wished to raise their rates, they were free to do so, subject to the statutory rate reasonableness standard, but that they could not impose rate increases on the basis of a misrepresentation.⁹⁹

B. The Safe Harbor was Intended to Benefit – Not Hurt – Shippers

The Board’s principal holding in *Rail Fuel Surcharges III* was that carriers could not use their fuel surcharges as profit centers.¹⁰⁰ This ruling was made to benefit shippers who otherwise might be forced to pay fuel surcharges that were greater than the carriers’ actual incremental costs of fuel.¹⁰¹

The Board also held in *Rail Fuel Surcharges III* that carriers could, but were not required to, use HDF prices in their fuel surcharge tables. To incent carriers to use HDF, the Board accorded “safe harbor” status to HDF.¹⁰² The Board believed shippers would benefit from carriers’ use of HDF-based fuel surcharge tables because:

⁹⁸ *Dairyland*, slip op. at 2.

⁹⁹ *Cargill I*, slip op. at 2.

¹⁰⁰ *See Rail Fuel Surcharges III*, slip op. at 7.

¹⁰¹ *Id.*

¹⁰² *Id.*, slip op. at 11.

- Shippers had tendered comments to the Board contending that use of the HDF Index “would better ensure accuracy, transparency and accountability, and thereby enhance the credibility of fuel surcharges in the eyes of those who pay them.”¹⁰³
- The Board believed that the HDF index “accurately reflects changes in fuel costs in the rail industry” and “closely correlates with other fuel cost indices, including the indices currently used by most carriers.”¹⁰⁴
- The Board believed that “there is minimal lag in this index. It is available with a 1-month lag, whereas other indices can lag 2 or 3 months behind the cost increases they measure.”¹⁰⁵

The Board never hinted, much less discussed, during the *Rail Fuel Surcharges* proceedings that according safe harbor status to HDF in rail carriers’ fuel surcharge tables would somehow permit carriers to engage in the very practice the Board had outlawed: using fuel surcharges as a profit center.

C. The Safe Harbor Should Not Be Used to Facilitate the Very Practice the Board Outlawed: Using Fuel Surcharges as Profit Centers

In *Cargill III*, the Board found that BNSF had used the assailed fuel surcharge as a profit center because BNSF’s fuel surcharge revenues under the assailed tariff exceeded its actual incremental fuel costs on traffic subject to the tariff by over \$181 million. However, the Board interpreted the safe harbor it adopted in *Fuel Surcharges III* as requiring it to substitute higher HDF prices BNSF did not pay, for the lower actual price BNSF did pay, in determining BNSF’s incremental fuel cost increases.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Rail Fuel Surcharges II*, slip op. at 6 (internal citation omitted).

As a result, the \$181 million in actual profit (that BNSF pocketed) was legally erased when the higher HDF prices were used to calculate BNSF's incremental fuel "costs."¹⁰⁶ This result turned the Board's *Rail Fuel Surcharges* principles upside down.

The purpose of *Rail Fuel Surcharges* was to preclude carriers' from using fuel surcharges as profit centers. The purpose of *Rail Fuel Surcharges* was not to assist carriers by adopting policies – including its safe harbor policy – that permitted carriers to use their fuel surcharges as profit centers. Allied Shippers submit that the Board misconstrued *Rail Fuel Surcharges III* in *Cargill III* and reached the wrong result.

However, even if the Board's construction was correct, what the Board needs to do now is revisit *Rail Fuel Surcharges* and take remedial actions that are consistent the Board's overriding objective: limiting the use of fuel surcharges to the recovery of a carrier's actual incremental fuel cost increases.

D. The HDF v. Actual Price "Spread" Issue is Not an Aberration

1. Quantification of the Spread in *Cargill*

In *Cargill*, the complainant shipper developed incremental fuel costs for each of 5.6 million+ shipments using a three step procedure:¹⁰⁷

- Step One – The base fuel cost for each shipment was calculated. The base fuel cost calculations assumed that BNSF utilized a base fuel price of \$0.73 per gallon in setting the base rate. The \$0.73 per gallon was used because BNSF disclosed in *Rail Fuel Surcharges* that the \$1.25 HDF price used in the challenged fuel surcharge

¹⁰⁶ *Id.*, slip op. at 14.

¹⁰⁷ See *Cargill* Opening at 21-22.

tariff equated to an actual internal BNSF price that BNSF paid for fuel of \$0.73 per gallon and the Board.

- Step Two – The fuel cost per gallon for each shipment was calculated on the date the shipment moved. The only change between the base fuel cost calculation and the date-of-shipment fuel cost calculation was to substitute the price BNSF was paying for fuel on the shipment date for the \$0.73 per gallon base fuel cost.
- Step Three – The Step One fuel cost for each shipment was subtracted from the Step Two fuel cost for each shipment to determine the actual incremental cost of fuel. For example, if the Step Two cost (the cost when the shipment moved) equaled \$200 per car and the Step One costs (the base fuel cost) equaled \$125 per car, the actual incremental fuel cost was calculated at \$75 per car (\$200 - \$125).

After calculating the incremental fuel costs (calculated using BNSF's actual fuel prices), Cargill compared the fuel surcharge revenues BNSF collected on the shipment to the actual incremental fuel cost increases, to determine the amount of overcharge (if any). This comparison was in effect a fourth step in Cargill's analysis:¹⁰⁸

- Step Four – Calculate the differential between the actual fuel surcharge revenues BNSF collected on the shipment and the actual incremental fuel costs calculated under Step Three above. For example, if the actual fuel surcharge revenues equaled \$100 per car and the actual incremental fuel cost increases calculated under Step Three equaled \$75 per car, Cargill calculated the overcharge for this shipment at \$25 per car (\$100 - \$75).

¹⁰⁸ See *id.* at 22-23.

Under the BNSF/Board approach, the four steps Cargill utilized were, in effect, modified by substituting HDF prices for actual BNSF fuel prices, as follows:¹⁰⁹

- Step One – The base fuel cost for each shipment was calculated. The base fuel cost calculations assumed that BNSF paid a base fuel price of \$1.25 per gallon in setting the base rate. The \$1.25 per gallon was used because that is the base HDF price per gallon in the challenged BNSF tariff.
- Step Two – The fuel cost per gallon for each shipment was calculated on the date the shipment moved. The only change between the base fuel cost calculation and the date-of-shipment fuel cost calculation was to substitute the HDF price per gallon on the date the shipment moved.
- Step Three – The Step One fuel cost for each shipment is subtracted from the Step Two fuel cost for each shipment to determine the HDF-based incremental cost of fuel. For example, if the Step Two cost (the cost when the shipment moved) equaled \$300 per car and the Step One costs (the base fuel cost) equaled \$200 per car, the HDF-based incremental fuel cost was calculated at \$100 per car (\$300 - \$200).
- Step Four – Calculate the difference between the actual fuel surcharge revenues BNSF collected on the shipment and the HDF-based incremental fuel costs calculated under Step Three above. For example, if the actual fuel surcharge revenues equaled \$100 per car and the actual incremental fuel cost increases calculated under Step Three equaled \$100 per car, BNSF calculated there was no overcharge for this shipment because the fuel surcharge revenues (\$100 per car) equaled the HDF-based incremental fuel cost increases (\$100 per car).

¹⁰⁹ BNSF developed a mathematical shortcut to make its calculations. It used its cost calculations to develop gallons consumed per month and multiplied the gallons consumed by the difference between the HDF price in the applicable shipment month and the base HDF price of \$1.25 per gallon. BNSF Cargill Reply at 58. The Board appears to have accepted this shortcut procedure in its final decision in *Cargill*. See *Cargill III*, slip op. at 13.

The “spread” issue the Board refers to in the ANPR arises by comparing the “spreads” or differentials between HDF and railroad fuel prices in the base and shipment periods.¹¹⁰ This spread can be illustrated by referencing the four step incremental fuel cost analysis set forth above:

- Assume in Step 3 that the HDF base price is \$1.25 per gallon, the HDF price at the time of shipment in January 2010 equals \$2.85 per gallon. This produces an HDF price difference of \$1.60 per gallon (\$2.85 - \$1.25).
- Assume in Step 3 that BNSF’s actual base price is \$0.73 per gallon, and BNSF’s actual fuel price at the time of shipment in May 2010 equals \$2.04 per gallon. This produces an actual price difference of \$1.31 per gallon (\$2.04 - \$0.73).
- The differential between the two Step 3 price differences equals \$0.29 per gallon (\$1.60 - \$1.31).

If the differential between HDF price differences and actual price differences used in the Step 3 incremental cost analysis results in a positive figure (*e.g.*, \$0.29 in the example set forth above), the use of the HDF price difference produces the appearance of higher incremental fuel costs than the carrier actually incurred. In *Cargill III*, the Board found that the differential between BNSF actual incremental prices and HDF incremental prices was positive in almost all time periods.¹¹¹

The difference arises because the “spread” between HDF prices and actual prices at the time of shipment moved is greater than it was at the time the base rate was set. Continuing the example:

¹¹⁰ See Verified Statement of Thomas D. Crowley and Robert D. Mulholland V.S. at 3 (“Crowley/Mulholland V.S.”).

¹¹¹ See *Cargill III*, slip op. at 17.

- The differential between the base HDF strike price and the actual base fuel price produces an initial spread of \$0.52 per gallon (\$1.25 - \$0.73).
- The differential between the actual HDF price and the actual BNSF fuel price at the time the shipment moved produces a movement period spread of \$0.81 per gallon (\$2.85 - \$2.04).
- The differential between the movement period spread and the initial spread results in an over-recovery of \$0.29 per gallon (\$0.81 - \$0.52).

2. Proof the Spread is Not an Aberration

The first question the Board asks in the ANPR is “whether or not the phenomenon that we observed in Cargill (a growing spread between a rail carrier’s internal fuel costs and the HDF index) was likely an aberration.”¹¹² The answer to the Board’s question is no.

As discussed above, there are four inputs needed to make the spread calculations: (i) the base period HDF; (ii) the time of shipment HDF; (iii) the actual fuel price equivalent to the HDF strike price; and (iv) the actual fuel price at the time of shipment. Inputs (i), (ii) and (iv) are all publicly available. However, based on its review to date, Allied Shippers have found that only two carriers have publicly disclosed the third input – the actual fuel price equivalent to an HDF strike price used in a fuel surcharge table.¹¹³

In *Rail Fuel Surcharges*, and in *Cargill*, BNSF disclosed that the \$1.25 HDF strike price in its fuel surcharge tables equated to a \$0.73 per gallon actual price of

¹¹² ANPR, slip op. at 3.

¹¹³ See *Crowley/Mulholland V.S.* at 10-11.

fuel.¹¹⁴ In *Rail Fuel Surcharges*, UP disclosed that the \$1.35 HDF strike price in its fuel surcharge tables equated to a \$0.75 per gallon actual price of fuel.¹¹⁵ Thus, a strike price spread analyses can only be made for BNSF and UP.

Allied Shippers' witnesses Crowley and Mulholland have undertaken spread differential analyses for BNSF and UP using publicly available data. Their analyses show that the average spread differential over the 1Q02 through 1Q14 time period equaled \$0.22 per gallon for BNSF shipments and \$0.07 per gallon on UP shipments; that in the twenty-eight quarters between since 2Q07 (when the Safe Harbor provision went into effect) and 1Q14, the spread differential has been positive for BNSF and UP in all quarters except four (two each for BNSF and UP); and that in recent years, the spread differential has consistently been both positive and substantial:¹¹⁶

¹¹⁴ See *Rail Fuel Surcharges*, Comments of BNSF Ry. Co. at 16 (filed Oct. 2, 2006); BNSF Cargill Reply at 67-68.

¹¹⁵ See *Rail Fuel Surcharges*, Comments of Union Pac. R.R. Co. at 9 (filed Oct. 2, 2006) and Comments of Union Pac. R.R. Co. at 8, 10 (filed April 27, 2006) (“\$1.35 per gallon equates to a UP fuel price of approximately 80 cents per gallon, while our cost recovery calculation begins at 75 cents per gallon.”).

¹¹⁶ See Crowley/Mulholland V.S. at 12-14 and Exhibit (C/M-6).

Difference Between the Implicit Spread and the Actual Spread in the HDF Price (cents per gallon)			
Quarter	HDF	BNSF	UP
1Q10	284.8	28.8	8.8
2Q10	302.5	17.5	13.5
3Q10	293.9	23.9	9.9
4Q10	314.5	26.5	8.5
1Q11	362.6	39.6	14.6
2Q11	401.5	27.5	12.5
3Q11	386.7	17.7	8.7
4Q11	387.4	26.4	11.4
1Q12	397.1	32.1	14.1
2Q12	395.1	17.1	14.1
3Q12	394.1	29.1	15.1
4Q12	401.8	20.8	16.8
1Q13	402.9	29.9	19.9
2Q13	388.3	26.3	18.3
3Q13	391.1	22.1	14.1
4Q13	386.9	24.9	15.9
1Q14	395.9	32.9	23.9

Source: Exhibit_(C/M-6)

Thus, all publicly available data shows that the growing spread issue the Board identified in *Cargill* is not an aberration and that, not surprisingly, the spread consistently favors the railroads.

E. The Problem in Using the HDF Safe Harbor as Construed by the Board is Self-Evident: It Permits Carriers to Use Fuel Surcharges as Profit Centers

The second question the Board poses in the ANPR is “whether there are problems associated with the Board’s use of the HDF Index as a safe harbor in judging

the reasonableness of fuel surcharge programs.”¹¹⁷ The answer to this question should be self-evident: yes.

The Board held in *Rail Fuel Surcharges III* that a carrier’s fuel surcharges should track the carrier’s actual fuel cost changes in providing service to its customers. The fuel cost a carrier incurs involves two component parts: the price the carrier pays for fuel and the amount of fuel consumed in providing the service. The incremental cost analysis should reflect the prices the carrier pays for fuel – *i.e.*, its actual price of fuel embedded in the base rate and the actual price of fuel it pays when the shipment moves – not some surrogate price the carrier does not pay.

Under the Board’s holding in *Cargill III*, the safe harbor is used as a springboard for substituting prices a carrier does not pay (HDF-based prices) for prices that a carrier does pay (its actual prices) in the incremental fuel cost analysis. The effect of this substitution in *Cargill* was to make an actual \$181 million overpayment (calculated using actual prices) appear to be a slight underpayment (calculated using HDF-based prices). The Board departs from reality when it substitutes prices carriers are not paying, for prices that carriers do pay, in conducting incremental fuel cost analyses.

F. The Remedy Here is Clear: Carriers Must Use Their Fuel Actual Price Changes in Permissible Fuel Surcharges

The third question the Board asks is “whether any problems with the safe harbor could be addressed through a modification of it.”¹¹⁸ The answer to this question is

¹¹⁷ ANPR, slip op. at 3.

¹¹⁸ *Id.*, slip op. at 3.

yes. The Board should modify the safe harbor by eliminating it, and requiring carriers that utilize any permitted fuel surcharge programs to use actual railroad fuel price changes, not HDF or other surrogate price changes, in their fuel surcharge tables. Allied Shippers' request is supported by policy reasons the Board cited when it adopted the HDF Index as a safe harbor.

1. Use of Actual Prices is More Accurate

The Board held in *Rail Fuel Surcharges III* that the HDF index “accurately reflects changes in fuel costs in the rail industry.”¹¹⁹ Experience has shown this statement is incorrect. In *Cargill*, the complainant shipper undertook the most comprehensive incremental fuel cost analysis in the history of the Board. It costed over 5,600,000 individual BNSF Ag and Industrial traffic moves transported over a five-year period (2006 to 2010).

While Cargill and BNSF disagreed on many issues, one issue they did not disagree on was that the HDF index was not accurately tracking BNSF's actual incremental fuel price changes. The most thorough and extensive incremental fuel cost analysis in the Board's history unequivocally demonstrated BNSF's actual incremental cost increases were at least \$181 million less than the incremental costs calculated using surrogate HDF-based prices.

The result in *Cargill* confirms the obvious: the most accurate way to measure fuel price changes in a fuel surcharge table is to predicate the table on a carrier's actual price changes, not changes from a surrogate index like HDF. Had BNSF's fuel

¹¹⁹ *Id.*, slip op. at 11.

surcharge table in *Cargill* used changes in actual BNSF fuel prices, instead of changes in HDF prices, the \$181 million over-recovery on Ag and Industrial product shipments would not have occurred since the price component in BNSF's fuel surcharge tables would have been accurately calibrated.

The same holds true for other shipments and other time periods.

Crowley/Mulholland conservatively estimate that BNSF's use of HDF price changes in its fuel surcharge tables, rather than its actual fuel price changes, has resulted in BNSF collecting "well over half-a-billion dollars in additional revenues on unit coal train and carload traffic between 2011 and 2013"¹²⁰ and that UP's use of HDF prices in its fuel surcharge tables, rather than its actual fuel prices, has resulted in UP "over-collect[ing] over a quarter-of-a-billion dollars in revenues on unit coal train and carload traffic between 2011 and 2013"¹²¹

The Board found in *Rail Fuel Surcharges III* that the HDF index "closely correlates with other fuel cost indices."¹²² However, as Crowley/Mulholland demonstrate, even if there was a perfect 100% correlation between changes in HDF prices and changes in a carrier's actual fuel prices, this does not mean that HDF price changes are a suitable substitute for actual price changes in a carriers fuel surcharge tables because the tables rely on absolute price changes.¹²³

¹²⁰ Crowley/Mulholland V.S. at 6 and Exhibit_(C/M-3) (quantifying the BNSF overcharge at approximately \$593 million).

¹²¹ *Id.* (quantifying the UP overcharge at approximately \$253 million).

¹²² *Rail Fuel Surcharges III*, slip op. at 11.

¹²³ Crowley/Mulholland V.S. at 16-18.

This is a subtle, but very important, demonstration that in lay terms can be summarized generally as follows:

- i. The fuel surcharge tables that BNSF and other carriers use are based on “absolute” price changes. For example, the BNSF fuel surcharge table in *Cargill* called for an additional 1 cent per loaded car-mile fuel surcharge for every 4 cent increase in HDF per gallon above the \$1.25 per gallon strike price. This 4 cent per gallon increase is an “absolute” price increase.
- ii. HDF price changes and actual fuel cost changes are closely correlated. For example, if HDF prices increase by 100%, actual fuel cost changes usually increase by a similar percentage over time.
- iii. The fact that HDF and actual railroad fuel price changes are closely (or exactly) correlated does not mean the absolute price increases are equal. For example, a 100% increase in a base fuel price of \$2 per gallon to \$4 per gallon correlates exactly to a 100% increase in a base fuel price increase of \$1 per gallon to \$2 per gallon (both are 100% increases), but the absolute difference in prices is different: a 100% increase in the \$2 per gallon base produces an absolute fuel cost increase of \$2 per gallon whereas a 100% increase in the \$1 per gallon produces an absolute fuel cost increase of only \$1 per gallon.
- iv. Since the fuel surcharge tables are based on absolute price changes, the key inquiry is not whether the HDF and actual price changes are closely correlated, but rather whether the absolute HDF and actual price changes closely match each other.

Crowley/Mulholland reviewed the changes in HDF prices to changes in actual diesel fuel prices from 1Q02 through 3Q13 for all major carriers. They found that “despite the strong correlation between HDF prices and railroad diesel fuel prices over the 49-quarter observation period, the absolute change in HDF fuel prices cannot be used

as a proxy for the absolute change in railroad fuel prices.”¹²⁴ “The spread between HDF and railroad fuel prices ranged from a low of \$0.13 per gallon to a high of \$1.22 per gallon over this period.”¹²⁵ They conclude, “[a]bsolute change in HDF price is clearly seen to be a poor surrogate for absolute change in railroad fuel prices.”¹²⁶

2. Use of Actual Prices Would Enhance Surcharge Credibility

The Board held in *Rail Fuel Surcharges III* that use of the HDF Index safe harbor “would better ensure accuracy, transparency and accountability, and thereby enhance the credibility of fuel surcharges in the eyes of those who pay them.”¹²⁷ Experience has shown that use of actual prices, not HDF prices, will “better ensure accuracy, transparency and accountability, and thereby enhance credibility of fuel surcharges in the eyes of those who pay them.”¹²⁸

After *Cargill*, shippers can have no faith that changes in HDF prices will yield accurate fuel surcharges. This result is buttressed by the Crowley/Mulholland analyses showing that the overcharge issue the Board identified in *Cargill* is not an aberration and that there are wide swings for all major carriers between the absolute differences in HDF prices and fuel prices they actually pay. Conversely, shippers can have faith that use of actual fuel price changes will yield accurate prices for fuel surcharge purposes.

¹²⁴ Crowley/Mulholland V.S. at 18.

¹²⁵ *Id.* at 10.

¹²⁶ *Id.*

¹²⁷ *Rail Fuel Surcharges III*, slip op. at 11.

¹²⁸ *Id.*

In *Rail Fuel Surcharges*, several shippers, including WCTL, urged the Board to direct carriers to utilize actual fuel price changes in their fuel surcharge tables:

[B]ecause data on the carriers' actual change in fuel prices is readily available, and it is a simple process to utilize this information in accounting for changes in railroad fuel prices, it is not necessary for the Board to require carriers to utilize a third-party fuel price index.¹²⁹

The time has come to do so.

3. Use of Actual Prices is Feasible and Independently Verified

Use of actual prices is clearly feasible because carriers closely monitor their fuel prices.¹³⁰ Carriers can readily publish the actual prices they pay for fuel each month, and then use these price changes in their fuel surcharge tables. Indeed, given the availability of actual fuel price changes, “[t]here simply is no reason or need for the railroads to rely on a surrogate.”¹³¹

In addition, actual price changes are independently verified. Carriers already provide quarterly reports to the Securities and Exchange Commission (“SEC”), as well as the Board, setting forth the actual prices they pay for fuel. This data set necessarily contains fuel price data on a monthly basis, so the Board could simply direct carriers to utilize the same actual price data set in their fuel surcharge programs.

¹²⁹ *Rail Fuel Surcharges*, Ex Parte No. 661, Comments of the WCTL at 17 (filed Oct. 2, 2006).

¹³⁰ See Crowley/Mulholland V.S. at 22.

¹³¹ *Id.* at 20.

4. Use of Actual Prices Would Limit Regulatory Lag

The Board held in *Rail Fuel Surcharges* that the use of the HDF safe harbor would result in “minimal lag” because the HDF index “is available with a 1-month lag, whereas other indices can lag 2 or 3 months behind the cost increases they measure.”¹³²

The Board’s predictions concerning the 1-month lag have not been correct. Carriers using HDF indices have almost uniformly included a 2-month lag in their fuel surcharge tables, *e.g.*, the fuel surcharge in July of any year is based on the HDF prices in May of the same year. More importantly for present purposes, carriers keep very close tabs on their actual fuel prices, currently report those prices quarterly to the SEC and the STB, and as Crowley/Mulholland emphasize, “[t]here is absolutely no reason why the railroads could not publish their fuel price data on a monthly basis.”¹³³

In addition, carriers’ use of actual price changes in their fuel surcharge tables should allow them to reach the 1-month lag target cited by the Board in *Rail Fuel Surcharges*. As Crowley/Mulholland point out, “[t]he railroads should have no problem turning around their monthly fuel price data in short order after the close of a given month,” and as a result, “[t]he railroads could move to a one-month lag system rather than the current two-month lag system, which would likely lead to better alignment between incremental fuel costs and fuel surcharges.”¹³⁴

¹³² *Rail Fuel Surcharges II*, slip op. at 6.

¹³³ Crowley/Mulholland V.S. at 20.

¹³⁴ *Id.* at 22.

5. Simply Eliminating the Safe Harbor is Not Enough

Allied Shippers submit the proper change is for the Board to (i) eliminate the safe harbor and (ii) direct carriers to base their fuel surcharge tables on their actual fuel price changes. Allied Shippers emphasize that simply eliminating the safe harbor is not enough. If that was the only remedy, carriers would still be free to use HDF price changes in their fuel surcharge tables, subject only to shipper challenge.

As discussed in Part II below, it is most unlikely that any shipper will be filing a fuel surcharge unreasonable practice case in light of the Board's actions in *Dairyland* and *Cargill* and, in any event, shippers should not have to file time consuming and expensive individual complaint actions to police carrier fuel surcharge practices. Instead the Board must take additional affirmative steps to protect shippers from carrier abuses of fuel surcharges by requiring carriers to use their actual, publicly reported, fuel price changes in their fuel surcharge tables.

G. There are No Benefits to Using Incorrect Price Surrogates

The fourth question posed by the Board in the ANPR is “whether any problems with the safe harbor are outweighed by its benefits.”¹³⁵ Allied Shippers' answer to this question is no. Allied Shippers see no benefit in using a surrogate for actual carrier price changes when use of the actual fuel price changes will produce more accurate fuel surcharges, and can be accomplished in a timely manner.

¹³⁵ ANPR, slip op. at 3.

H. Addressing the Safe Harbor is a Step in the Right Direction, but the Board Needs to do Much More to Protect Shippers

In the ANPR, the Board states that “[p]arties are also encouraged to comment on any other matter that they believe bears on whether the safe harbor should be modified or removed.”¹³⁶ The safe harbor issue is simply one cog in the Board’s fuel surcharge jurisprudence.

Modifying the safe harbor by directing carriers to use actual fuel price changes is a step in the right direction to achieve the Board’s stated objective in *Rail Fuel Surcharges III*: limiting the use of fuel surcharges to actual incremental fuel cost increases not included in base rates.

However, addressing the safe harbor is not all that needs to be done for the Board to achieve its stated objectives. Other changes in the Board’s current rail fuel surcharge policies must be made as well. These changes are discussed in Part II below. Allied Shippers emphasize that this proceeding is currently in the advanced notice stage. There is no legal prohibition on the Board receiving comments at the advanced stage that are directed to all pertinent issues regarding rail fuel surcharges.

In addition, the Board “faced with new developments or in light of reconsideration of the relevant facts and its mandate, may alter its past interpretation and overturn past administrative rulings and practice.”¹³⁷

¹³⁶ *Id.*

¹³⁷ *American Trucking Ass’ns. v. Atchison, T. & S.F. Ry.*, 387 U.S. 397, 416 (1967).

II. THE BOARD’S RULINGS IN *DAIRYLAND* AND *CARGILL* EFFECTIVELY INSULATE MILEAGE-BASED FUEL SURCHARGES FROM MEANINGFUL REGULATORY OVERSIGHT

A. *Cargill* Insulates Abusive Double Recovery Practices from Any Regulatory Oversight

In *Rail Fuel Surcharges III*, the Board held that a carrier engages in an unreasonable practice if it engages in “double-dipping,” that is “double recovery for the same fuel cost increase.”¹³⁸ The Board observed that “[t]his [double dipping] can occur when a carrier both escalates a base rate using an index (such as the RCAF) that includes changes in the cost of fuel and applies a fuel surcharge to the same movement covering the same time period.”¹³⁹

The Board prospectively banned this form of double-dipping and invited shippers to address any other forms of double recovery in individual complaint proceedings. *Cargill* did just that, but the Board summarily dismissed its double-dipping claims, thus in effect deregulating two clear double dipping practices: base rate double dipping and index double dipping.

1. Base Rate Double-Dipping is Insulated from Any Review

The purpose of a fuel surcharge is to “recoup[] increased fuel costs that are not reflected in the base rate.”¹⁴⁰ In *Rail Fuel Surcharges*, many shippers expressed that carriers were setting base prices using higher fuel prices in effect at the time their shipments moved and then applying the fuel surcharge based on a fuel surcharge table

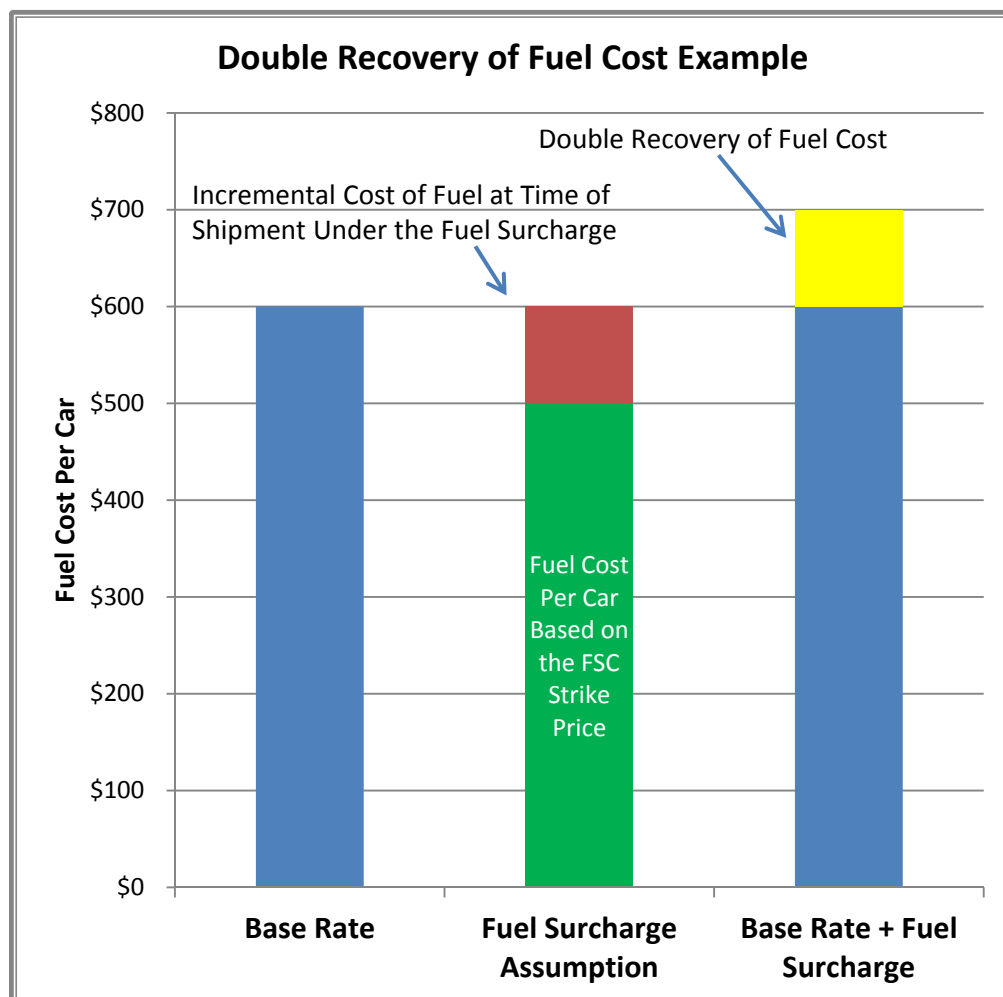
¹³⁸ *Rail Fuel Surcharges III*, slip op. at 10.

¹³⁹ *Id.*

¹⁴⁰ See *Rail Fuel Surcharges II*, slip op. at 4.

that used a lower strike price. If this were in fact the case, the carriers would be recovering some of the same incremental fuel costs twice.

For example, assume a carrier set a base rate in 2012 using the current fuel cost per car of \$600, which reflected the then current price of railroad diesel fuel. Also, assume that the base rate was subject to a fuel surcharge of \$100 per car, which reflected a lower strike price for diesel fuel in the carrier's fuel surcharge table. If this occurred, the carrier would be double-recovering \$100 in fuel costs, once in the base rate and again via the fuel surcharge:



Shippers urged the Board “to require railroads to separately identify the fuel cost component in their base rates, or adopt a presumption that the prevailing cost of fuel is fully reflected in any newly-established base rates.”¹⁴¹ The Board decided not to address this linkage issue “at this time,” but left the issue open for consideration by the Board in individual complaint proceedings.¹⁴²

Cargill took up the Board’s invitation. It alleged that BNSF was double recovering the same fuel surcharges twice on its Ag and Industrial traffic, by “setting its base rates on Cargill traffic to include recovery of fuel prices higher than the BNSF fuel strike price of \$0.73 per gallon implicit in the [challenged fuel surcharge tariff].”¹⁴³

The Board granted BNSF’s motion to dismiss Cargill’s base rate double count claim on grounds that this form of double recovery did not involve “inconsistent representations;”¹⁴⁴ that BNSF set its base rates ““without express reference to costs;””¹⁴⁵ that Cargill’s claim “is manifested exclusively in the level of rates that Cargill is charged,”¹⁴⁶ and the claim ran afoul of the Board’s asserted policy not to “deconstruct” base rates.¹⁴⁷

¹⁴¹ *Rail Fuel Surcharges III*, slip op. at 3.

¹⁴² *Id.*, slip op. at 10.

¹⁴³ *Cargill, Inc. v. BNSF Ry.*, Docket No. 42120, Cargill’s Complaint ¶ 8(i) (filed Apr. 19, 2010).

¹⁴⁴ *Cargill I*, slip op. at 6.

¹⁴⁵ *Id.* (quoting *Cargill, Inc. v. BNSF Ry.*, Docket No. NOR 42120, Def.’s Mot. for Partial Dismissal at 9 (filed May 28, 2010)).

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

The Board's decision removes any Board oversight from a clearly egregious form of fuel surcharge double recovery. Allied Shippers respectfully request that the Board reconsider its policy choice and change it.

- **Inconsistent Representations.** A carrier clearly makes inconsistent representations when it sets base rates and fuel surcharges that do not reflect the same fuel base. For example, BNSF informed the public in 2006 that the fuel surcharge at issue in *Cargill* was designed to recover fuel cost increases BNSF was incurring over a base fuel price of \$0.73 per gallon.¹⁴⁸

If BNSF set a base price years later using a higher fuel price, there clearly is an “inconsistent representation.”¹⁴⁹ representing to the public that the fuel surcharge is intended to capture fuel increases above \$0.73 per gallon and then not adhering to that representation by setting base rates intended to recover fuel costs set at higher prices per gallon.

This practice not only involves inconsistent representations, it also produces exactly the same result as other forms of double dipping: it impermissibly results in the “double recovery for the same fuel cost increase.”¹⁵⁰

- **Rates Not Set Using Costs.** If BNSF and other carriers set base prices “without express reference to costs,”¹⁵¹ how can they represent to the public that

¹⁴⁸ See *Rail Fuel Surcharges*, Comments of BNSF Ry. Co. at 16 (filed Oct. 2, 2006).

¹⁴⁹ *Cargill I*, slip op. at 6.

¹⁵⁰ *Rail Fuel Surcharges III*, slip op. at 10.

¹⁵¹ *Cargill I*, slip op. at 6 (internal quotation marks omitted).

the fuel surcharge is intended solely to recover incremental fuel costs not included in their base rates? The only way to make this representation is to know what fuel costs are included in the base rates.

- **Focus on Rate Levels.** Requiring carriers to match base rate fuel price levels with the corresponding strike price levels in their fuel surcharge tables does not impermissibly focus on the overall level of rail rates. It simply means that if a carrier is going to utilize a fuel surcharge program to “recoup[] increased fuel costs that are not reflected in the base rate,”¹⁵² it does what it represents to the public it says it is doing: using its base rate to capture certain fuel costs and using its fuel surcharge to capture additional incremental fuel costs not included in the base rate.

- **Deconstruction of Base Rates.** The Board’s policy is unbalanced. If it is going to permit carriers to use fuel surcharges to “recoup[] increased fuel costs that are not reflected in the base rate”¹⁵³ – a policy that reflects “deconstructing” a base rate into component parts – it cannot turn around and rationally say it will not enforce its own policy because it does not wish to “deconstruct” base rates.¹⁵⁴

- **Result of the Board’s Ruling.** The Board’s ruling in *Cargill III* will preclude any other shipper from pursuing a base rate/fuel strike price claim, despite the fact that such claims, if proven, clearly result in over-recovery of a carrier’s actual

¹⁵² *Rail Fuel Surcharges II*, slip op. at 4.

¹⁵³ *Id.*

¹⁵⁴ *Cargill I*, slip op. at 6.

incremental fuel cost increases because the same incremental fuel cost increase is captured twice: once in the base rate and again in the fuel surcharge.

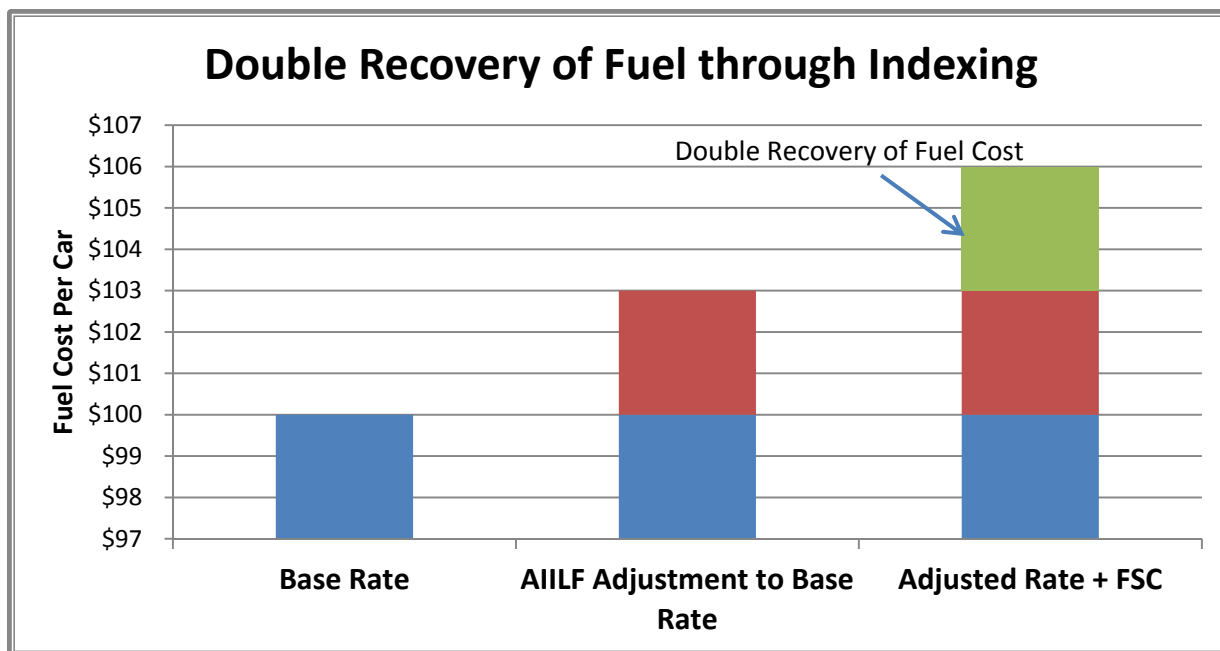
2. AIILF-Based Double-Dipping is Insulated from Any Review

In *Rail Fuel Surcharges III*, the Board banned one form of index driven “double dipping” – adjusting a movement base rate using an index that included a fuel component and applying a fuel surcharge to the movement.¹⁵⁵

Cargill alleged that BNSF was engaged in a similar double-dipping exercise when it applied commonly used rate adjustment procedures, such as the AIILF, that excluded the fuel component from the adjustment index, to a movement base rate in situations where the movement was also subject to a fuel surcharge.

For example, assume that the base rate contained a fuel component of \$100 per car which equaled the fuel cost at the \$0.73 per gallon base price and the rate adjustor (without a fuel component) called for the base rate to be increased by 3% or \$3 per car ($\100×0.03). The \$3 would be recovered twice: once through application of the rate adjustor and then by application of the fuel surcharge:

¹⁵⁵ See *Rail Fuel Surcharges III*, slip op. at 10.



The Board rejected Cargill’s adjustment-based double recovery contentions on grounds that this form of double recovery did not involve “inconsistent representations.”¹⁵⁶ However, the “inconsistent representations” are clear: a carrier is using a rate adjustment method to collect the same incremental fuel costs twice (or a portion thereof) – once through the rate adjustor and a second time with the fuel surcharge.¹⁵⁷

It bears emphasis here that simply removing the fuel component from a rate adjustment index does not necessarily mean that the index values themselves will decrease. For example, the AILF simply removes fuel and reweights the remaining non-fuel components. The resulting index values for each quarter may be higher or lower than the RCAF – which is the rough equivalent of the AILF (as approved by the Board)

¹⁵⁶ *Cargill I*, slip op. at 5-6.

¹⁵⁷ See *Crowley/Mulholland V.S.* at 27-29.

plus the RCAF fuel component – depending on the comparative values of the component parts of the two indices.

Allied Shippers respectfully request that the Board reconsider its policy choice here and direct carriers to stop applying the AILF index in a manner that permits double-recovery of the same incremental fuel cost increases.

B. *Dairyland* and *Cargill* Effectively Preclude Shippers from Pursuing Remaining Profit Center Claims

In *Dairyland* and *Cargill*, the Board did permit shippers to present evidence that carriers were using their fuel surcharges as unlawful profit centers, but the Board imposed so many practical hurdles on perfection of profit center claims that Allied Shippers believe it is most unlikely that any other shippers will pursue such cases before the Board.

1. *Dairyland* Makes it Too Expensive for Small Shippers to Pursue Profit Center Claims

In *Dairyland*, the Board ruled that a complainant shipper could not prove that a carrier was engaged in an unreasonable practice if the carrier was collecting fuel surcharge revenues on a complainant shipper's traffic that substantially exceeded the incremental fuel costs the carrier was incurring in providing service to that shipper. Instead, the Board ruled that a complainant shipper had to demonstrate that the carrier was collecting fuel surcharge revenues substantially in excess of the incremental fuel

costs the carrier was collecting on all traffic subject to the challenged fuel surcharge tariff.¹⁵⁸

Allied Shippers submit that the practical effect of the Board's ruling in *Dairyland* is to effectively preclude small shippers like Dairyland from pursuing unreasonable fuel surcharge cases. Under *Dairyland*, a small shipper must calculate incremental fuel costs for hundreds of thousands, or multiple millions, of individual shipments and compare those costs to the actual revenues the carrier is collecting on all of these shipments. Small shippers simply cannot bear the very large litigation costs associated with this exercise and, following *Dairyland*, no small shipper has filed an unreasonable fuel surcharge case at the Board.

2. *Cargill* Makes it Too Expensive and Uncertain for Large Shippers to Pursue Profit Center Claims

In *Cargill*, the Board permitted Cargill to pursue its claims that BNSF was using its fuel surcharges as a profit center.¹⁵⁹ Allied Shippers submit that the Board's rulings in *Cargill* make it very unlikely that another large shipper will pursue an unreasonable fuel surcharge claim before the Board for several interrelated reasons:

- **Litigation Burden.** Even for large shippers, it is a massive, and very costly, burden, to retain experts and develop incremental costs for all traffic that is subject to a fuel surcharge tariff. As discussed above, Cargill had to develop costs for over 5,600,000 separate carloads, many of which moved on multiple trains. The required

¹⁵⁸ *Dairyland*, slip op. at 5-6.

¹⁵⁹ *Cargill III*, slip op. at 5-6.

effort, and associated cost, is one that few shippers, even large ones, have the resources to undertake.

- **Cost Rulings.** The Board appears to have decided all disputed cost rulings against Cargill.¹⁶⁰ These rulings include one holding that the Board will disregard the actual number of locomotives on a train, as well as the actual train trailing weights, in determining “the actual incremental cost of fuel incurred”¹⁶¹ by a carrier on traffic subject to the challenged fuel surcharge.¹⁶²

Under this approach, a shipper cannot accurately calculate “the actual incremental cost of fuel.” Instead, a shipper will be forced to try to prove that a carrier is overcharging shippers on all traffic subject to a challenged fuel surcharge using, among other things, incorrect locomotive counts and incorrect train trailing weights.

- **Uncertain Damages/Prescriptive Relief Limitations.** The Board’s procedural rulings in the case will undoubtedly have chilling effects on shippers. During the course of the case, BNSF argued that Cargill could get no damages relief unless it demonstrated market injury¹⁶³ and sought discovery that, if granted, would have required Cargill to respond to detailed requests for market information and documents on over

¹⁶⁰ *Cargill III*, slip op. at 11-12 (rejecting Cargill’s positions and evidence on “movement-specific adjustments to URCS,” “fuel hedging,” “locomotive unattributable and non-locomotive fuel costs”).

¹⁶¹ *Cargill I*, slip op. at 5.

¹⁶² *Cargill Inc. v. BNSF Ry.*, Docket No. NOR 42120, Rebuttal Statement of Cargill, Inc. at 10 (filed Nov. 23, 2011) (describing Cargill’s movement-specific URCS adjustments).

¹⁶³ *See Cargill, Inc. v. BNSF Ry.*, Docket No. NOR 42120, Def.’s Mot. to Compel Disc. at 9-11 (filed Mar. 3, 2011).

50,000 individual shipments.¹⁶⁴ Cargill argued that this discovery was legally irrelevant (because BNSF should not be permitted to keep its ill-gotten gains)¹⁶⁵ and, if permitted, would have effectively ended its case given the extraordinary burdens the discovery entailed.¹⁶⁶

Unfortunately, the Board did not nip this abuse-of-process in the bud, as it decided instead to bi-furcate the case, and address damages issues/discovery after making its liability determinations¹⁶⁷ and, since it later determined BNSF had no liability, there was resolution of the damages issues. As a result, any shipper bringing a new case will have to face the specter that even if it proves a carrier is using its fuel surcharge as an unlawful profit center, its ability to obtain damages will be called into question and resolution of damages issues may require litigation that is far more complex and time consuming than the already complex and time consuming litigation necessary to prove its entitlement to relief on the merits.

The Board also ruled in *Cargill III* that Cargill could not obtain any relief for rebased fuel surcharges BNSF began to charge on some Cargill moves after Cargill filed its case.¹⁶⁸ The Board held that the only way that Cargill could obtain relief for

¹⁶⁴ See *Cargill, Inc. v. BNSF Ry.*, Docket No. NOR 42120, Complainant's Reply in Opp'n to Def.'s Mot. to Compel Disc. at 23 (filed Mar. 14, 2011).

¹⁶⁵ *Id.* at 19.

¹⁶⁶ *Id.* at 24.

¹⁶⁷ *Cargill II*, slip op. at 3.

¹⁶⁸ *Cargill III*, slip op. at 4 n.5.

rebased fuel surcharges was to file a new complaint challenging the rebased charges.¹⁶⁹

The Board's ruling here opens up a whole new hornet's nest of problems for shippers because, in any new case, a carrier may be able to limit prescriptive relief simply by making some modest adjustments to its fuel surcharges, *e.g.*, by rebasing them.

- **Case Duration.** In the *Cargill* case, it took the Board nearly three and one-half years to decide the phase one liability issues. The Board did not reach phase two – damages – but if had, it appeared the case would have gone on for a lot longer. Thus, if the past is prologue, any large shipper contemplating a fuel surcharge case must plan on being in litigation for years at the Board, with no guarantee of any relief in the form of damages or meaningful prescriptive relief.

III. CARRIERS HAVE NOT UPDATED THEIR FUEL SURCHARGE TABLES TO FACTOR IN THEIR IMPROVED FUEL CONSUMPTION

Rail carriers began publishing fuel surcharge tariffs over a decade ago. These tariffs contain both fuel price and fuel consumption factors. Despite the fact that their fuel consumption has improved greatly over the last decade, no major rail carrier has updated the fuel consumption factors in its published fuel surcharge tariffs. The result is that shippers are paying higher fuel surcharges than they should if the programs included properly calibrated and regularly updated fuel consumption factors that reflected the carriers increased fuel efficiency in a timely manner.

¹⁶⁹ *Id.*

A. Fuel Consumption Factors Are an Important Component in Rail Fuel Surcharge Tables

The fuel cost that a carrier incurs on any given shipment is a function of the price the carrier pays for fuel and the amount of fuel consumed. Any cost-based fuel surcharge must factor in both incremental changes in fuel prices as well as fuel consumption in order to develop a proper fuel surcharge. For example, if a carrier's price of fuel increases by \$0.04 per gallon, and 100 gallons of fuel are consumed in providing the service, the fuel surcharge should equal \$4 (100 gallons x \$0.04 per gallon).

Carriers' fuel surcharge tables incorporate fuel consumption factors in the "step functions" contained in their fuel surcharge tables. The fuel surcharge at issue in *Cargill* illustrates this point. The challenged fuel surcharge table provided that for each 4 cent increase in HDF prices over the strike price of \$1.25 HDF, BNSF would impose an additional fuel surcharge of 1 cent per loaded car-mile:

BNSF Non-Coal Fuel Surcharge Table

<u>Time Periods Average Price of HDF Between</u>	<u>Fuel Surcharge Cents per Mile</u>	<u>Time Periods Average Price of HDF Between</u>	<u>Fuel Surcharge Cents per Mile</u>
\$0.00 to \$1.249	0.00	\$2.13 to \$2.169	0.23
\$1.25 to \$1.289	0.01	\$2.17 to \$2.209	0.24
\$1.29 to \$1.329	0.02	\$2.21 to \$2.249	0.25
\$1.33 to \$1.369	0.03	\$2.25 to \$2.289	0.26
\$1.37 to \$1.409	0.04	\$2.29 to \$2.329	0.27
\$1.41 to \$1.449	0.05	\$2.33 to \$2.369	0.28
\$1.45 to \$1.489	0.06	\$2.37 to \$2.409	0.29
\$1.49 to \$1.529	0.07	\$2.41 to \$2.449	0.30
\$1.53 to \$1.569	0.08	\$2.45 to \$2.489	0.31
\$1.57 to \$1.609	0.09	\$2.49 to \$2.529	0.32
\$1.61 to \$1.649	0.10	\$2.53 to \$2.569	0.33
\$1.65 to \$1.689	0.11	\$2.57 to \$2.609	0.34
\$1.69 to \$1.729	0.12	\$2.61 to \$2.649	0.35
\$1.73 to \$1.769	0.13	\$2.65 to \$2.689	0.36
\$1.77 to \$1.809	0.14	\$2.69 to \$2.729	0.37
\$1.81 to \$1.849	0.15	\$2.73 to \$2.769	0.38
\$1.85 to \$1.889	0.16	\$2.77 to \$2.809	0.39
\$1.89 to \$1.929	0.17	\$2.81 to \$2.849	0.40
\$1.93 to \$1.969	0.18	\$2.85 to \$2.889	0.41
\$1.97 to \$2.009	0.19	\$2.89 to \$2.929	0.42
\$2.01 to \$2.049	0.20	\$2.93 to \$2.969	0.43
\$2.05 to \$2.089	0.21	\$2.97 to \$3.009	0.44
\$2.09 to \$2.129	0.22	\$3.01 to \$3.049	0.45

Each \$0.04 per gallon increase thereafter, apply an additional \$0.01 per mile.

Source: BNSF Rules Book 6100-A, Item 3375E (Effective Jan. 1, 2006).

BNSF explained in *Cargill* that the 1:4 “step function” (i.e., a 1 cent increase in the fuel surcharge for each 4 cent increase in HDF) incorporated the assumption that the traffic subject to the challenged surcharge consumed fuel at an average rate of 0.25 gallons per loaded car mile, or stated in more familiar terms, 4 MPG. As summarized by one of BNSF’s witnesses:

The MPG assumption in the surcharge mechanism is important in determining the proper rate at which the cent-per-mile charge would increase as the price of fuel increases. I will refer to this as the “step function” The step function in a fuel surcharge based on a 4 MPG assumption would be \$0.01

per mile for every \$0.04 per gallon increase in the fuel index. In other words, if the traffic subject to the mileage-based fuel surcharge is estimated to consume fuel at a rate of four MPG, the mileage-based fuel surcharge would have a step function of \$0.01 per mile for every \$0.04 per gallon increase in the fuel index.¹⁷⁰

The same witness provided an example illustrating that to recover a \$4 increase in fuel costs on a 400 mile movement, the per mile fuel surcharge would equal \$0.01 per mile (assuming the 4 MPG consumption rate):

If trains handling carload traffic consume fuel at a rate of 4 MPG, then about 100 gallons of fuel would be consumed on a 400 mile movement (4 MPG x 100 gallons = 400 miles). At \$1.00 per gallon, the cost of fuel consumed on this 400 mile trip would be \$100 (\$1.00 x 100 gallons = \$100). If fuel prices increased by \$0.04 per gallon to become \$1.04, then the cost of fuel on this 400-mile movement would increase by \$4 (\$1.04 x 100 gallons = \$104). A charge of \$0.01 per mile for every \$0.04 per gallon increase in fuel prices would ensure coverage of the additional fuel cost. In this example, a \$0.01 per mile charge times 400 miles equals the \$4 increase in fuel costs.¹⁷¹

The MPG assumptions used by carriers are critical. If they are too low, carriers will over-recover their actual incremental fuel cost increases. For example, if BNSF's actual MPG on the traffic cited in the example above was 4.5 MPG, but BNSF applied a fuel surcharge predicated on the errant assumption that the traffic moved at 4 MPG, it would collect a surcharge of \$4 when in fact the correct surcharge should have been \$3.55, producing an over-recovery of \$0.45:

¹⁷⁰ BNSF Cargill Reply, Verified Statement of Paul B. Anderson at 6.

¹⁷¹ *Id.* at 6-7.

If trains handling carload traffic consume fuel at a rate of 4 ~~[4.5]~~ MPG, then about ~~100~~ **[88.89]** gallons of fuel would be consumed on a 400 mile movement (~~4 MPG x 100 gallons = 400 miles~~) **[4.5 MPG x 88.89 gallons = 400 miles]**. At \$1.00 per gallon, the cost of fuel consumed on this trip would be \$100 (~~\$1.00 x 100 gallons~~ **[\$88.89 (\$1.00 x 88.89 gallons)]**). If fuel prices increased by \$0.04 per gallon to become \$1.04, then the cost of this 400-mile movement would increase by \$4 (~~\$1.04 x 100 gallons = \$104~~) **[\$3.55 (\$1.04 x 88.89 gallons = \$92.44)]**. A charge of \$0.01 per mile for every \$0.04 per gallon increase in fuel prices would ensure ~~coverage~~ **[over-recovery]** of additional fuel cost. In this example, a \$0.01 per mile charge times 400 miles ~~equal the~~ **produces a \$4 fuel surcharge even though the actual** increase in fuel costs is **\$3.55, thus producing fuel surcharge revenues that exceed actual fuel cost increases by \$0.45.**

Given the billions of dollars shippers pay each year in fuel surcharges, any use of fuel consumption factors that are too low will translate into hundreds of millions, if not billions of dollars, in shipper overpayments.

B. Carriers Have Not Updated Their Fuel Surcharge Tables to Reflect Their Improved Fuel Consumption

Over the past decade, rail carriers' fuel consumption has markedly improved. Nevertheless, carriers have not revised their fuel surcharge tables, actions that result in shippers paying inflated fuel surcharges.

1. The Tables were Established Using Fuel Consumption Factors that are Now a Decade Old

BNSF and other major carriers first published mileage-based fuel surcharge tariffs in the 2006 to 2009 time frame. These tables reflect the following step function/MPG calculations:

<u>Carrier</u>	<u>MPG</u>	<u>Traffic</u>	<u>Tariff</u>	<u>Effective Date</u>
BNSF	4	Ag	6100-A, Item 3375E	2006
BNSF	6	Coal	6100-A, Item 3381	2006
BNSF	4	Indus.	6100-A, Item 3375H	2007
UP	5	Coal (CO/UT)	6602-C, Item 695	2007
UP	6	Coal (PRB)	6603-C, Item 694	2007
CSXT	4	ALL	8661-B	2007
CN	5.22	BULK	7402	2007
CN	5	NONBULK	7402	2007
CP	4.8	BULK	9700	2009
CP	4.4	NONBULK	9700	2009

BNSF disclosed in *Cargill* that it developed fuel consumption factors for the tariffs it published in 2006 using data it had collected in 2004 and 2005.¹⁷²

Presumably, the same holds true for other carriers – *i.e.*, the fuel consumption factors they published in the 2006 to 2009 time frame are predicated on historical data collected prior to the tariff publication data. Thus, the carriers’ fuel consumption factors reflect fuel consumption data that is now nearly a decade old (if not older).

Significantly, none of the major carriers have published any tariff revisions that have modified the now decade old step function/MPG calculations. Thus, shippers continue to pay fuel surcharges based on the assumption that carrier fuel consumption has not improved over the last decade – an assumption that is demonstrably false.

2. Carriers are Far More Fuel Efficient Today than They were a Decade Ago

Major carriers have uniformly extolled the fact that they are far more fuel efficient today than they were a decade ago. Witness the following statements made by the major carriers:

¹⁷² See *Cargill III*, slip op. at 14-15.

- **BNSF:** “Over the last decade, BNSF has acquired more than 2,700 new locomotives while retiring many older units. Our newest locomotives are about 15 percent more fuel efficient than the engines they replaced. Improvements in operating and maintenance practices [also] have [had] a substantial impact on our fuel efficiency.”¹⁷³

- **UP:** “Union Pacific improves its fuel efficiency through improvements in locomotive technology, engineer training and employee involvement. . . . From 2000 to 2013, Union Pacific achieved a 17 percent improvement in fuel efficiency. . . . In 2011, Union Pacific announced a goal to reduce our fuel consumption rate by 1 percent annually from 2011 to 2015, as measured on a gross-ton mile basis. Attaining this goal would represent a 23 percent fuel-efficiency improvement since 2000.”¹⁷⁴

- **CSX:** “CSX has invested \$1.5 billion over the last decade to improve its locomotive fuel efficiency Using the [Event Recorder Automated Download] program, we saved more than 19 million gallons of fuel between 2005 and 2009 CSX has added 30 multi-engine locomotives (GenSets) to its fleet in the last 5 years. . . . These units are replacing older switching locomotives and are 25% more fuel efficient.”¹⁷⁵

¹⁷³ BNSF Ry., *Fuel Efficiency*, <http://www.bnsf.com/communities/bnsf-and-the-environment/fuel-efficiency/>.

¹⁷⁴ Union Pac., *Envtl. Mgmt.*, <https://www.uprr.com/she/emg/operations.shtml>.

¹⁷⁵ CSX, *Fuel Efficiency*, <http://www.csx.com/index.cfm/about-csx/projects-and-partnerships/fuel-efficiency/>.

- **NS:** NS reported in 2013 that “locomotive fuel use on a relative basis has trended downward . . . over the past five years as the railroad has deployed technologies to improve operating efficiencies.”¹⁷⁶ In addition, NS reported that “the company has adopted initiatives that directly or indirectly contribute to fuel . . . savings” including “[i]dle-reduction technologies for locomotive engines,” “equip[ping] older units with more fuel-efficient and cleaner-burning engines,” use of “[t]rack wayside sensors that improve fuel economy” and improved “[d]ispatcher technologies.”¹⁷⁷

- **CN:** “CN is recognized as the most fuel efficient railroad in North America. Since 1991, CN’s fuel efficiency has improved by 38% In both 2012 and 2013, CN reduced fuel consumption by 1% per ton mile.”¹⁷⁸

- **CP:** “We have updated our locomotive fleet with GE Evolution Series Locomotives. Compared to locomotives manufactured 20 years ago, Evolution Series locomotives . . . are 20% more fuel efficient.” In addition, “[t]he majority of CP’s fleet is equipped with an automatic stop/start fuel saving device . . . [that] have saved more than . . . 10.5 million US gallons of fuel since introduced in 2002.”¹⁷⁹

Allied Shippers’ witness Thomas E. Johnson, an expert on locomotive fuel efficiency confirms that major railroads “locomotive fuel efficiency has increased by

¹⁷⁶ NS, *Fuel Efficiency*, http://nssustainability.com/2014_sustainability_report/environmental_performance/fuel_efficiency.html.

¹⁷⁷ *Id.*

¹⁷⁸ CN, *CN Rail’s Response – City of N. Vancouver*, <http://www.cnv.org/~media/D6B31AE8389147EE828798D8FD62A7C4.pdf>.

¹⁷⁹ CP, *Rail Env’tl. Facts*, <http://www.cpr.ca/en/in-your-community/environment/Pages/rail-environmental-facts.aspx>.

approximately 20 percent over the past decade”¹⁸⁰ due to a variety of factors including the use of more fuel efficient locomotives and improved operating practices that reduce fuel use.¹⁸¹

- **Locomotive Design.** Over the past decade, locomotive manufacturers have designed new locomotives that “use up to 17 percent less fuel when compared to older . . . locomotive models.”¹⁸² Carriers are also “actively investigating new alternative-fuel locomotive designs” that are even more fuel efficient.¹⁸³

- **Locomotive Mix.** Carriers are aggressively replacing older road locomotive units “with newer, fuel efficient models.”¹⁸⁴

<u>Railroad</u>	<u>Total Units – 2013</u>	<u>New Fuel Efficient Units - Post 2002</u>
BNSF	6,801	3,088 (45%)
UP	7,981	2,842 (36%)
CSXT	3,944	956 (25%)
NS	3,859	1,344 (35%)

In addition, carriers are replacing older switch locomotives with newer models that “use as much as 30 percent less fuel when compared to older switching locomotives.”¹⁸⁵

- **Operating Practices.** Carriers have instituted aggressive programs in the last ten years to reduce fuel consumption through use of improved operating practices such as training engineers on simulators “to use best practices and improve their

¹⁸⁰ Verified Statement of Thomas E. Johnson at 4 (“Johnson V.S.”).

¹⁸¹ See Johnson V.S. at 4-10. See also Crowley/Mulholland V.S. at 24-27.

¹⁸² Johnson V.S. at 4-5.

¹⁸³ *Id.* at 5.

¹⁸⁴ *Id.* at 6-7.

¹⁸⁵ *Id.* at 5-6.

awareness of fuel-efficient train handling techniques;”¹⁸⁶ using new train control systems that allow “the crew or dispatcher to achieve on-time arrival with the lowest possible fuel use;”¹⁸⁷ developing new “procedures to eliminate unnecessary locomotive idling;”¹⁸⁸ and increasing the use of distributed power trains “with resulting savings in terms of fuel consumption per ton-mile.”¹⁸⁹

Carriers’ failure to revise their fuel surcharge tables to account for their improved fuel efficiency results in additional illicit fuel surcharge profits.

Crowley/Mulholland conservatively estimate that in 2013 alone, carriers’ failure to use accurate updated fuel consumption factors generated huge fuel surcharge profits: BNSF of \$150 million for BNSF; \$180 million for UP; and \$130 million for CSXT.¹⁹⁰

C. Carriers Have Not Adhered to their Updating Representations in *Rail Fuel Surcharges*

The Board addressed locomotive fuel efficiency improvements in *Rail Fuel Surcharges*. Board members were aware at that time that carriers were embarking on new programs to improve fuel efficiency and, at the May 2006 hearing in *Rail Fuel Surcharges*, repeatedly asked railroads whether they planned on modifying their fuel surcharge tables or taking other actions to incorporate the carriers’ improved locomotive

¹⁸⁶ *Id.* at 8.

¹⁸⁷ *Id.*

¹⁸⁸ *Id.* at 9.

¹⁸⁹ *Id.* at 9-10.

¹⁹⁰ Crowley/Mulholland V.S. at 26-27.

fuel consumption into their rail fuel surcharge programs. The carriers told the Board that they would do so.

For example, the following exchanges between then Vice-Chairman Mulvey and Thomas Hund (then BNSF's CFO), James Foote (then CN's Vice Chairman) and Robert Knight (UP's CFO):

VICE CHAIRMAN MULVEY: There's been some charge that the fuel surcharge program does not account for efficiency gains. That the railroads achieve tremendous efficiency gains as they're putting in newer locomotives, replacing the older, less fuel efficient ones.

Is there any way to factor in the fuel efficiency gains or do you think that that's [sic] being done?

MR. HUNT: I think over time that needs to be accounted for.¹⁹¹

VICE CHAIRMAN MULVEY: Okay. Does your fuel surcharge program account for fuel efficiency gains or do you have any way of factoring in fuel efficiency gains?

MR. FOOTE: We would look at our entire fuel expense and if we thought that it was appropriate or we were getting to the point where we were overcharging in any way, shape or form, we would adjust it to take that into consideration.¹⁹²

VICE CHAIRMAN MULVEY: You began your testimony discussing the improved fuel efficiency of your locomotive fleet, a 7 percent reduction and improvement in fuel efficiency over the last 6/7 – 6 years or so. Is that factored at all into your calculation of the fuel surcharge?

¹⁹¹ *Rail Fuel Surcharges Hearing* at 270.

¹⁹² *Id.* at 278.

MR. KNIGHT: It is.¹⁹³

While the carriers told the Board in 2006 that they would address fuel efficiency gains in their fuel surcharge programs, they clearly have not done so. The fuel consumption factors in their fuel surcharge tables have not changed despite the carriers' substantial improvements in fuel efficiency over the past decade.

D. Shippers Cannot Update the Tables for the Carriers

Shippers, of course, cannot update the carriers' fuel surcharge tables to reflect improved locomotive fuel consumption. While shippers can, as Allied Shippers are doing now, point out the obvious improvements in fuel consumption that are not reflected in the fuel surcharge tables, shippers do not have access to all the data necessary to make specific adjustments to specific carriers' fuel surcharge tables and, even if they did, they have no authority to change the tables themselves.

Nor, as the *Cargill* case illustrates, can shippers effectively use STB litigation to obtain access to pertinent fuel consumption studies. In *Cargill*, the complainant sought and obtained discovery of many internal BNSF fuel studies that showed BNSF's fuel consumption (in MPG's) was higher than the 4 MPG in the assailed fuel surcharge tariff.¹⁹⁴ However, the Board found none of these internal studies

¹⁹³ *Id.* at 328-29.

¹⁹⁴ *See Cargill III*, slip op. at 14-15.

addressed what the Board believed was the pertinent question: BNSF's fuel consumption calculated using fuel surcharge mileages.¹⁹⁵

The *Cargill* case illustrates the problems in trying to use internal carrier studies to prove that fuel consumption is overstated in carrier fuel surcharge tables. Specifically, the carrier can effectively avoid “showing its cards” by not performing (or not producing) internal fuel studies that contain the metrics the Board appears to be looking for: fuel consumption studies tied to fuel surcharge miles for specific fuel surcharge programs.

IV. THE BOARD SHOULD INSTITUTE MEANINGFUL OVERSIGHT OF CARRIER FUEL SURCHARGE PROGRAMS OR, IN THE ABSENCE OF SUCH OVERSIGHT, DIRECT CARRIERS TO PHASE-OUT PERMANENT FUEL SURCHARGES

As discussed above, Allied Shippers urge the Board to require carriers to use actual rail mileages in their fuel surcharge tables. However, the Board must do much more to manage the carriers' fuel surcharge programs to insure they are not being used as unlawful profit centers.

A. The Board Needs to Perform Meaningful Reviews of Mileage-Based Fuel Surcharge Programs

In *Rail Fuel Surcharges III*, the Board prospectively banned percent-of-price fuel surcharges and one form of fuel surcharge double-recovery. The Board left any further policing of rail fuel surcharge programs to individual shippers in individual complaint actions. However, as discussed above, the Board's policy of policing by

¹⁹⁵ *Id.* at 15 (“The resulting MPG figures [in the BNSF MPG studies cited by Cargill] . . . were calculated using actual rail miles, whereas BNSF required an MPG estimate . . . based on shortest [surcharge] rail miles.”).

complaint has not worked, nor is it fair or reasonable to place the burden of policing entire carrier fuel surcharge programs on the shoulders of individual shippers.

Allied Shippers request that the Board shift its approach to one where Class I carriers that choose to utilize fuel surcharge programs are required to submit an annual certification to the Board addressing three topics, along with sufficient documentation to allow the Board and interested shippers to audit the certifications.

1. Annual Fuel Consumption Certifications

Carriers should certify that the fuel consumption factors in their fuel surcharge tables accurately reflect their actual fuel consumption on the traffic subject to the fuel surcharge. This certification should be accompanied by and supported by an annual report containing studies and data sufficient to audit the carriers' certification.

2. Annual Profit Center Certifications

Carriers should certify that the revenues they are collecting under each of their fuel surcharge tariffs or programs that do not exceed the actual incremental costs the carriers are incurring to provide the service subject to the tariffs or programs. This certification should be accompanied by an annual report containing studies and data sufficient to audit the carriers' certification.

3. Annual No Double Recovery Certifications

The Board should adopt a policy that precludes all forms of double recovery of fuel surcharges, including double recovery by not aligning base rates with fuel surcharge strike prices and by applying any rate adjustment index (including ones without a fuel component) to the total base rate. The Board should then require each

carrier to certify to the Board each year that it is not engaged in any prohibited double-dipping practices. This certification should be accompanied by an annual report containing studies and data sufficient to audit the carriers' certification.

The certification procedures Allied Shippers propose are rooted in precedent. The Board clearly has the legal authority to require carriers to provide certifications and reports.¹⁹⁶ And, prior to the Staggers Act, the Board's predecessor, the ICC did just that: it did not permit carriers to use fuel surcharges unless the carriers' documented the surcharges were cost-justified, the fuel cost increases were not recovered by other pricing mechanisms, and were limited to cost recovery only.¹⁹⁷

In addition, the certifications and reports should be easy for the carriers to prepare and submit to the Board because they involve collection of basic fuel surcharge data carriers can (if they do not already) maintain in the ordinary course of business¹⁹⁸ and, in any event, Allied Shippers submit any carrier compliance costs are a tiny drop in the bucket compared to the billions in fuel surcharge revenues carriers collect from their

¹⁹⁶ See 49 U.S.C. § 721(b)(3) (The Board may "obtain from those carriers and persons information the Board decides is necessary to carry out" its regulatory responsibilities).

¹⁹⁷ See, e.g., *Temp. Fuel Shortfall Recovery Surcharge*, Apr. 11, 1980, 364 I.C.C. 336 (1980).

¹⁹⁸ See *Crowley/Mulholland V.S.* at 31-33.

customers¹⁹⁹ and is far outweighed by importance of the integrity of these programs to the shipping public.

If carriers are going to continue to use fuel surcharges, the Board must take a more proactive role – similar to that performed by its predecessor – to insure that fuel surcharges are not being deceptively, and unlawfully, used as profit centers.

B. Alternatively, the Board Should Order Carriers to Phase-Out Fuel Surcharges

The rail industry's decision in the early 2000's to resurrect fuel surcharge tariffs, and to make those tariffs permanent was a major step backwards in the evolution of railroad pricing. Even in their prior hey-day in the 1970's, the ICC did not favor this form of pricing, regulated it closely, and did not permit the use of permanent fuel surcharge tariffs.²⁰⁰

The use of fuel surcharge tariffs also runs afoul of the Staggers Act. One of Congress' principal goals in adopting the Staggers Act was to eliminate the need for even temporary fuel surcharge tariffs by giving the ICC the authority to publish a quarterly index of rail cost changes.²⁰¹ The RCAF is a direct result of this Congressional mandate,

¹⁹⁹ See, e.g., STB Summary of Consolidated Report of Railroad Fuel Cost, Consumption and Fuel Surcharge Revenue for 1Q14 (showing Class I railroads collected over \$2 billion in fuel surcharge revenues for the quarter ended March 31, 2014), available at <http://www.stb.dot.gov/econdata.nsf/260029d11703bd498525740100662c49/931c64c1fd85562985257ccb0052ab68?OpenDocument>.

²⁰⁰ See *Effect of Modifying Proclamation No. 3279 & Other Anticipated Energy Conservation Measures on the Operation of Carriers Subject to the Interstate Commerce Act*, 350 I.C.C. 563 (1975).

²⁰¹ See Staggers Act § 203(a), 94 Stat. at 1901-02 (adding former 49 U.S.C. § 10707(a)(2)(B)).

and as the ICC stated at the time it initially proposed the RCAF, its adoption eliminated the need for carriers to use fuel surcharge tariffs.²⁰²

In *Rail Fuel Surcharges*, WCTL, and several other shippers, argued that there was no legitimate need for carriers to resurrect the long-discredited use of fuel surcharge tariffs because use of the RCAF was a perfectly adequate method for carriers to fully and accurately recover their actual incremental fuel costs and one that the ICC had designed for this very purpose:

WCTL emphasizes that railroads can be made whole for any fuel price changes using the fuel component of an established industry price adjustment mechanism, the Rail Cost Adjustment Factor (“RCAF”). WCTL addressed fully the use of the RCAF as an appropriate, fair, and time-tested fuel cost recovery mechanism in its April 27 [2006] Statement.

The RCAF is the longstanding, preferred railroad cost index methodology adopted by the ICC and the STB. The RCAF has been widely incorporated into rail carriers’ private contracts and common carrier pricing authorities, it is well-known to railroads and shippers, and it is straightforward to apply. The Board has ordered the implementation of the RCAF as a means of protecting railroads’ and shippers’ interests in accurately tracking carrier cost changes. The index is also readily available, as Congress has directed the Board to publish the RCAF on at least a quarterly basis. Additionally, as demonstrated in WCTL’s April 27 [2006] Statement, the RCAF’s fuel index has very closely tracked the carriers’ price per gallon fuel costs.²⁰³

²⁰² See *Railroad Cost Recovery Procedures*, 364 I.C.C. 841 (1981).

²⁰³ *Rail Fuel Surcharges*, Ex Parte No. 661, Comments of the WCTL at 5-6 (filed Oct. 2, 2006) (citations omitted); *accord Rail Fuel Surcharges Hearing*, Tr. at 239-40 (test. on behalf of the EEI) (“it would be far more reasonable, accurate and transparent for the railroads to take RCAF increases”); Tr. at 252-53 (test. on behalf of the Am. Chemistry Council) (agreeing with the EEI position “in terms of the RCAF”); *Rail Fuel Surcharges*, Ex Parte No. 661, Comments of Entergy Corp. at 10 (filed Oct. 2, 2006)

The Board did not address the threshold issue raised by WCTL and other shippers in *Rail Fuel Surcharges*: whether there was any legitimate need for permanent fuel surcharge tariffs given the discredited history of these tariffs and the existence of a superior alternative for fuel cost recovery – the RCAF.

The Board should take this issue on now, particularly in light of *Cargill*. In that case, the Board found that BNSF was using its fuel surcharge as a profit center and had used the fuel surcharge to deceptively collect over \$181 million in profits from its Ag and Industrial traffic shippers. Using fuel surcharges as profit centers is exactly what shippers feared and the actual overcharge is most likely far greater than the \$181 million had the Board permitted Cargill to pursue its double recovery allegations.

Allied Shippers submit that the *Cargill* decision should serve as a wake-up call to the Board, but not one that is narrowly focused on the inner-workings of the Board’s “safe harbor” rulings in *Rail Fuel Surcharges III*. The Board needs to take a broader view in light of *Cargill* and answer the threshold issue of why carriers need to use discredited permanent fuel surcharges at all when there clearly is a better method to collect incremental fuel cost increases – one that this agency’s predecessor developed and this agency has endorsed – the RCAF.

(“Entergy believes that use of the RCAF without a separate fuel surcharge is the preferred course”); Supplemental Comments of Ameren Energy Fuels & Servs. Co. at 8 (filed Oct. 2, 2006) (“The RCAF was specifically designed and implemented by the Interstate Commerce Commission to recover fuel cost increases without the need for a separate fuel surcharge”).

Consideration of this issue is of paramount importance if the Board is not going to effectively regulate carriers' current fuel surcharge practices. The Board's rulings in *Dairyland* and *Cargill* place too many obstacles in shippers' way to make individual complaints a viable regulatory mechanism for regulating fuel surcharge programs. The regulatory onus falls on the Board. If the Board chooses not to meaningfully regulate carrier fuel surcharge programs in the manner proposed here by Allied Shippers, it should order the carriers to phase them out.

Phasing out permanent fuel surcharge tariffs will not leave carriers with no means of recouping their incremental fuel cost increases. They can, if they choose to do so, utilize the RCAF – an index that permits full and timely recovery of incremental fuel cost increases.²⁰⁴ Shippers' interests would be protected as well because the Board regulates the development of the RCAF to insure that it fulfills its intended purpose: accurately and timely measuring changes in railroad costs.

²⁰⁴ See *Crowley/Mulholland V.S.* at 34-35.

CONCLUSION

Allied Shippers request that the Board take actions that are consistent with the views set forth in these Comments.

Respectfully submitted,

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Dated: August 4, 2014

BEFORE THE
SURFACE TRANSPORTATION BOARD

	)	
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	)	
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RAIL FUEL SURCHARGES	)	Docket No. EP 661
(SAFE HARBOR)	)	(Sub-No. 2)
	)	
	)	
	)	
	)	

Opening
Verified Statement
of

Thomas D. Crowley
President

And

Robert D. Mulholland
Vice President

L. E. Peabody & Associates, Inc.
On Behalf Of

Allied Shippers

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LIST OF EXHIBITS

Exhibit No.	Title
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1	Thomas D. Crowley Statement of Qualifications
2	Robert D. Mulholland Statement of Qualifications
3	Demonstration of Windfall Allowed Under STB's Safe Harbor Provision (Based on BNSF and UP Statistics)
4	Comparison of Historical Railroad Fuel Prices to Highway Diesel Fuel ("HDF") Price
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7	Hypothetical Example Showing the Impact of the Misapplication of the AII-LF Index Under the Current Fuel Surcharge Programs
8	Impact of Application of Dated Fuel Consumption Rates on Fuel Surcharge Program Revenues, 2013

I. INTRODUCTION

We are Thomas D. Crowley and Robert D. Mulholland, economists and President and Vice President, respectively, of L. E. Peabody & Associates, Inc., an economic consulting firm that specializes in solving economic, transportation, marketing, financial, accounting and fuel supply problems. We have spent most of our careers of over forty (40) and nineteen (19) years, respectively, evaluating fuel supply issues and railroad operations, including railroad costs, prices, financing, capacity and equipment planning issues. Our assignments in these matters were commissioned by railroads, producers, shippers of different commodities, and government departments and agencies. We have previously presented evidence before the Surface Transportation Board (“STB” or “Board”), including evidence on fuel surcharge formulae, variables used by railroads to develop fuel surcharge rates applied to their traffic base, and the fuel-related costs incurred to move the associated shipments. A copy of our credentials are included as Exhibit__(C/M-1) and Exhibit__(C/M-2) to this verified statement (“VS”).

We have been requested by Counsel for Allied Shippers to address specific issues raised by the Board in its May 29, 2014 decision in this proceeding.¹ Our VS addresses these issues further below under the following topical headings:

- II. The Safe Harbor Provision of *Fuel Surcharges*² Should be Removed
- III. The Variable Spread between Rail Carriers’ Fuel Prices and HDF Prices that were Observed in *Cargill*³ are the Rule, Not the Exception

¹ STB Ex Parte No. 661 (Sub-No. 2), *Rail Fuel Surcharges (Safe Harbor Provision)*, served May 29, 2014 (“*Safe Harbor*”).

² STB Ex Parte No. 661 (Sub-No. 1), *Rail Fuel Surcharges*, served January 26, 2007 (“*Fuel Surcharges*”).

³ STB Docket No. 42120, *Cargill Incorporated v. BNSF Railway Company*, served August 12, 2013 (“*Cargill*”).

- IV. There are Serious Problems Associated with the Board's Use of the HDF Index as a Safe Harbor in Evaluating the Reasonableness of Fuel Surcharge Programs
- V. Removal of the Safe Harbor Should Be Accompanied by a Board Order Directing Carriers to Use Actual Fuel Prices In Their Fuel Surcharge Tables
- VI. The Problems with the Safe Harbor Provision Far Outweigh any Perceived Benefits
- VII. Elimination of the Safe Harbor Provision Does Not Obviate the Need for the STB to Actively Monitor and Review All Aspects of the Railroads' Fuel Surcharge Programs
- VIII. The Board has an Obligation to Keep Close watch over the Railroads' Fuel Surcharge Program Performance and Adjust the Programs as Necessary to Ensure Public Confidence in the Programs
- IX. In the Absence of Required Board Oversight, Permanent Fuel Surcharges Should Be Eliminated

II. THE SAFE HARBOR PROVISION OF *FUEL SURCHARGES SHOULD BE REMOVED*

The Board's decision in *Cargill* essentially gave the railroads license to use the Safe Harbor provision of *Fuel Surcharges* to take advantage of favorable price spreads and collect fuel surcharge revenues in excess of the incremental fuel costs they incur and claim to collect through their fuel surcharge programs. The Board's interpretation of the Safe Harbor language gave the railroads permission to game the system and knowingly overcharge shippers, which they have been doing since 2007.⁴ Since *Cargill*, the railroads have been on notice that the Board is aware that they have been abusing the immunity from challenge afforded to them by the Board's ruling. Yet not a single railroad has changed the structure of its program to address the problem articulated by the Board. The railroads inaction speaks volumes, i.e., they will continue to take advantage of their favorable position if left to their own devices. Left unchecked, the railroads' immunity from challenge will continue to result in their extraction of excess revenues from shippers who have no recourse.

The Class I railroads' mileage-based fuel surcharge programs⁵ all share a common format. They are based on four central presumptions: (1) that the railroads' fuel consumption rates are known and constant; (2) that the base rates recover fuel costs incurred by the railroad at a set strike-price; (3) that the railroad's strike-price is equivalent to an identified HDF price; and (4) that the differential (or "spread") between railroad fuel price and HDF price is constant.

⁴ 2006 in the case of BNSF, which instituted a mileage-based HDF program before the Board's 2007 *Fuel Surcharges* decision.

⁵ Unlike the other six (6) Class I carriers, Norfolk Southern Railway ("NS") does not maintain a mileage-based fuel surcharge program. NS's percentage-based fuel surcharge programs are based on WTI prices and are applied only to contract and non-regulated traffic.

For example, the BNSF Railway Company (“BNSF”) fuel surcharge program challenged by Cargill was based on the following presumptions: (1) BNSF carload and agricultural traffic consumes fuel at the rate of four (4) loaded car-miles per gallon; (2) BNSF rates were set based on the presumption that BNSF paid \$0.73 per gallon for fuel; (3) BNSF pays \$0.73 per gallon for fuel when the market price for HDF is \$1.25 per gallon; and (4) there is always a \$0.52 per gallon spread between the BNSF fuel price and the HDF price.

Under this framework, changes in the HDF price are used as a surrogate for changes in the railroad fuel price, and the fuel surcharge applied to the traffic group is determined based on the differential between the HDF market price and the fuel surcharge program HDF base price. When the HDF price increased from the base \$1.25 per gallon by \$1.00 to \$2.25 per gallon, the BNSF fuel price is assumed to have also increased from the base \$0.73 per gallon by \$1.00 to \$1.73 per gallon. Because BNSF presumes its carload traffic moves at four-miles per gallon, this \$1.00 per gallon fuel price increase would require a \$0.25 per gallon fuel surcharge.⁶

In *Cargill*, the Board found that: (1) BNSF carload and agricultural traffic *did* consume fuel at the rate of four (4) loaded car-miles per gallon; (2) BNSF rates *did* reflect BNSF costs at the \$0.73 per gallon of fuel price level; (3) BNSF *did* pay \$0.73 per gallon for fuel at a point in history when the market price for HDF was \$1.25 per gallon; and (4) there *was not* always a \$0.52 per gallon spread between BNSF fuel price and HDF price during the study period. More specifically, the Board found that the spread was greater than the presumed \$0.52 per gallon for most of the study period. As a result,

⁶ If a carload moves 1,000 loaded miles at a rate of four (4) loaded car miles per gallon, it consumes 250 gallons of fuel ($1,000 \div 4$). At 250 gallons, a \$1.00 per gallon price increase requires an additional \$250 in fuel expenses to move the carload from origin to destination. To recover the \$250 attributable to this carload, BNSF must recover \$0.25 per mile ($1,000 \times \$0.25 = \250).

the Board found that BNSF's formula led to a systematic over-recovery of its incremental fuel costs (above its strike-price fuel cost level) over the study period. The following simple example demonstrates this problem.

In the second quarter of 2008, the average HDF price was \$4.395 per gallon on average,⁷ and BNSF paid \$3.51 per gallon for its diesel fuel on average.⁸ Compared to its strike-price of \$0.73 per gallon, BNSF incurred actual incremental fuel expenses of \$2.78 per gallon (\$3.51 - \$0.73). On a 1,000 loaded mile shipment at four (4) loaded car-miles per gallon, this equates to actual incremental fuel costs of \$695 per carload (\$2.78 x 250 gallons = \$695.) To be made whole, BNSF would need to collect an additional \$0.695 per loaded car-mile on this 1,000 mile move (\$0.695 x 1,000 miles = \$695).⁹

However, BNSF's fuel surcharge program collected fuel surcharge revenues based on the false presumption that BNSF paid \$3.875 per gallon. (\$4.395 - \$0.52). Compared to its strike-price of \$0.73 per gallon, BNSF falsely presumed that it incurred incremental fuel expenses of \$3.145 per gallon (\$3.875 - \$0.73). On a 1,000 loaded mile shipment at four (4) loaded car-miles per gallon, this equates to bogus incremental fuel costs of \$786.25 per carload (\$3.145 x 250 gallons = \$786.25 per carload). Therefore, under its fuel surcharge program construct, BNSF would collect an additional \$0.786 per loaded car-mile on this 1,000 loaded mile move (\$786.25 per carload ÷ 1,000 loaded miles = \$0.786 per loaded car-mile). For this particular car, BNSF would have charged the shipper \$91.25 per carload more in fuel surcharges than the incremental fuel costs it

⁷ See Exhibit__(C/M-4) at line 26, column (2).

⁸ Id at line 26, column (6).

⁹ This is a slight oversimplification because it ignores the two-month lag between the HDF pricing period and the fuel surcharge application period. However, for purposes of this demonstration, the lag is irrelevant.

actually incurred to move the shipment, even assuming all other fuel surcharge formula components are reasonable and accurate (\$786.25 - \$695 = \$91.25).

Whenever the spread between the HDF price and the railroad actual price is greater than the presumed spread (as in the above example), it benefits the railroad. Even assuming that BNSF had correctly estimated its fuel consumption rates, correctly developed its base rates to reflect a \$0.73 per gallon strike-price, and correctly identified a point in history when the BNSF fuel price was \$0.73 per gallon and the HDF market price was \$1.25 per gallon, the Board found that BNSF had taken advantage of the Safe Harbor provision and actually over recovered \$181 million in revenues exceeding its incremental fuel costs on carload traffic between 2006 and 2010.

As shown in Exhibit__(C/M-3), which is based on public data, the spread between BNSF fuel prices and HDF prices has increased since the 2006-2010 time period about which the Board expressed concern in *Cargill*.¹⁰ BNSF has extracted roughly an additional 6 to 7 cents per loaded car-mile in revenues on carload traffic and an additional 4 to 5 cents per loaded car-mile on coal traffic between 2011 and 2013.¹¹ Based on BNSF's average length of haul for coal and carload traffic, and conservatively assuming that BNSF has achieved 75 percent coverage for its fuel surcharge programs, BNSF has collected well over half-a-billion dollars in additional revenues on unit coal train and carload traffic between 2011 and 2013¹² directly attributable to the Safe Harbor protection.

The story is similar for the Union Pacific Railroad Company ("UP"). As shown in in Exhibit__(C/M-3), the spread between UP fuel prices and HDF prices has also

¹⁰ See Exhibit__(C/M-3) at line 2.

¹¹ Id at line 5.

¹² Id at lines 7-8.

increased since the 2006-2010 time period. UP's surcharge program formulae have led to UP extracting roughly 1 to 3 cents per loaded car-mile in revenues on coal and carload traffic between 2011 and 2013.¹³ Based on UP's average length of haul for coal and carload traffic, and conservatively assuming that UP has achieved 75 percent coverage for its fuel surcharge programs, UP has over-collected over a quarter-of-a-billion dollars in revenues on unit coal train and carload traffic between 2011 and 2013¹⁴ directly attributable to the Safe Harbor protection.

Although CSXT has not made public statements regarding the presumed spread between its internal strike-price and its claimed HDF equivalent, the spread between HDF and CSXT fuel price has also increased since the 2006-2010 time period.¹⁵ These are the three large railroads in terms of rail volume and HDF-based fuel surcharge revenues.¹⁶

As discussed in greater detail in the following sections of this VS, the fact that CSX Transportation ("CSXT") and the Canadian National Railway ("CN"), Canadian Pacific Railway Limited ("CPRS") and the Kansas city Southern Railway Company ("KCS") have not publicly disclosed their presumed spreads highlights another problem with the use of HDF as a surrogate for railroad fuel prices in the fuel surcharge programs. Without knowledge of the presumed spreads, it is impossible for shippers to determine the extent to which the actual spread leads to over-recovery of incremental fuel costs through the various fuel surcharge programs. This lack of transparency is at odds with the spirit of a cost-recovery mechanism.

¹³ Id at line 5.

¹⁴ See Exhibit__(C/M-3) at lines 7-8.

¹⁵ See Exhibit__(C/M-5) at lines 53-56, column (4).

¹⁶ NS uses WTI price—not HDF price—as its proxy for railroad fuel price in its fuel surcharge programs.

There is no doubt that the Safe Harbor provision is bad policy and needs to be removed. As discussed in more detail below, Safe Harbor is unnecessary and only serves to reduce transparency and diminish shipper confidence in the rules governing the fuel surcharge programs. If the Board should decide to leave the Safe Harbor provision in place, then the provision must be altered significantly to ensure fairness.

**III. THE VARIABLE SPREAD BETWEEN RAIL CARRIERS’
FUEL PRICES AND HDF PRICES THAT WERE OBSERVED
IN CARGILL ARE THE RULE, NOT THE EXCEPTION**

The central problem with the Board’s Safe Harbor provision is that it presumes the price differential between HDF and railroad fuel price is constant. It is not.

Our Exhibit__(C/M-5) contains a table showing the historical quarterly price differential (i.e., “spread”) between HDF prices and railroad fuel prices for the first quarter of 2002 (“1Q02”) through the first quarter of 2014 (“1Q14”) time period. Basic statistical analysis of historical HDF and railroad fuel prices reveals that while the correlation between the changes in the two sets of prices shows a strong positive correlation (e.g., when the HDF changes, railroad fuel prices also tend to change in the same direction,) the absolute change in price differs significantly among the distinct commodities.

Figure No. 1 below is a line chart depicting the Exhibit__(C/M-5) price spread data.

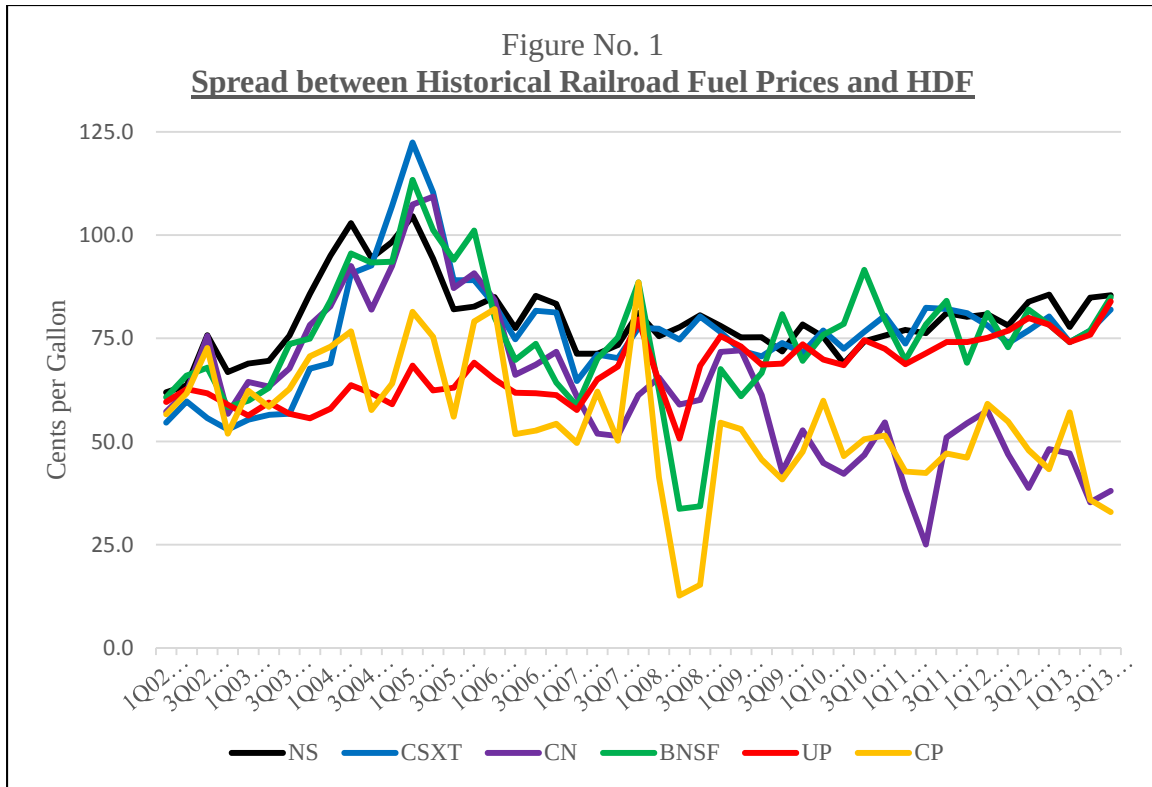


Figure No. 1 demonstrates that the spread between HDF and railroad fuel prices is dynamic. The spread between HDF and railroad fuel prices ranged from a low of \$0.13 per gallon to a high of \$1.22 per gallon over this period. Absolute change in HDF price is clearly seen to be a poor surrogate for absolute change in railroad fuel prices. However, under the “Safe Harbor” provision, the railroads are encouraged to use this demonstrably poor surrogate (and the results are protected from challenge by the shippers.)

A. STRIKE PRICE

Not all railroads have been forthright in disclosing their fuel strike-price level. The strike-price is the fuel price used by the railroads to set base rates. Specifically, the base rate fuel component is set assuming fuel costs a certain amount per gallon, and that any incremental fuel cost the railroad incurs above that strike price level will be recovered through the fuel surcharge program. Implicit in this rate-setting procedure is

that the railroads believe the HDF price at which its fuel surcharge begins is equivalent to the railroad strike price.

Both BNSF and UP have made public statements regarding the development of their strike-price equivalent HDF value. BNSF claims that its strike-price of \$0.73 per gallon is the equivalent of its \$1.25 HDF fuel surcharge program beginning price level:

By way of background, the objective of BNSF's fuel surcharge program is to recover the increase in BNSF's fuel cost per gallon over the defined strike price of \$0.73 per gallon. The entry point of \$0.73 per gallon was based on competitive truck fuel surcharge entry points and historical prices of highway diesel fuel. BNSF's price of \$0.73 per gallon is roughly equal to \$1.25 per gallon of highway diesel fuel.¹⁷

In its comments filed in *Fuel Surcharges*, UP claimed that:

UP's FSC programs since their inception have been set to recover UP's incremental cost of diesel fuel in excess of approximately \$0.75 per gallon. That equates to approximately \$1.35 per gallon in UP's FSC programs that utilize DOE's HDF index. UP's new mileage-based programs will commence at \$2.30 per gallon under the HDF index.¹⁸

BNSF has claimed publicly that its presumed price spread is \$0.52 per gallon (\$1.25-\$0.73), and UP has claimed publicly that its presumed price spread is \$0.60 per gallon (\$1.35-\$0.75). Some of UP's fuel surcharge programs begin at HDF price levels other than \$1.35 per gallon, but UP's public statements regarding its implementation of those programs implies that its presumed spread is constant for all of its various programs.

In addition, BNSF has rebased its fuel surcharge programs such that the HDF beginning price is now equal to \$2.50 per gallon.¹⁹ BNSF has not made public its updated strike-price. However, should either BNSF or UP believe that the presumed

¹⁷ Comments of BNSF in *Fuel Surcharges*, October 2, 2006.

¹⁸ Comments of UP in *Fuel Surcharges*, April 2, 2007, p. 6.

¹⁹ See workpaper coal2-mb-program-details-and-table.pdf.

spread should differ depending on the surcharge program strike-price level, that belief would be an overt acknowledgement that the spread is dynamic, and a concession that the Safe Harbor provision is inherently flawed and should be abandoned.

Based on the public record, the railroads operate under the presumption that the spread between railroad fuel price and HDF is somewhere in the vicinity of \$0.52 to \$0.60 per gallon. Exhibit __ (C/M-6) shows the differential between the spreads implicit in the BNSF and UP fuel surcharge programs and the actual observed spreads for the 1Q02 through 1Q14 time period. As shown in 3Q05, the spread for BNSF was actually \$1.13 per gallon²⁰, more than double its presumed spread of \$0.52 per gallon. For BNSF, the differential between implicit spread and actual spread was \$0.61 per gallon in 3Q05.²¹

As discussed above, whenever the actual spread is greater than the implicit spread, the railroads' surcharge programs recover more in fuel revenues than they incur in fuel costs. As shown in Exhibit __ (C/M-6), in all but two (2) quarters since the first quarter of 2002, this differential has favored BNSF. Similarly, in all but two (2) quarters since the second quarter of 2007, when the Safe Harbor provision took effect, the differential has favored UP. This means the railroads have been and remain in a position to take advantage of the favorable spread and hide behind the "Safe Harbor" provision.

Figure No. 2 below is a line chart showing the Exhibit __ (C/M-6) spread differential data.

²⁰ Exhibit __ (C/M-5), Line 15, Column (6).

²¹ Exhibit __ (C/M-6), Line 15, Column (6).

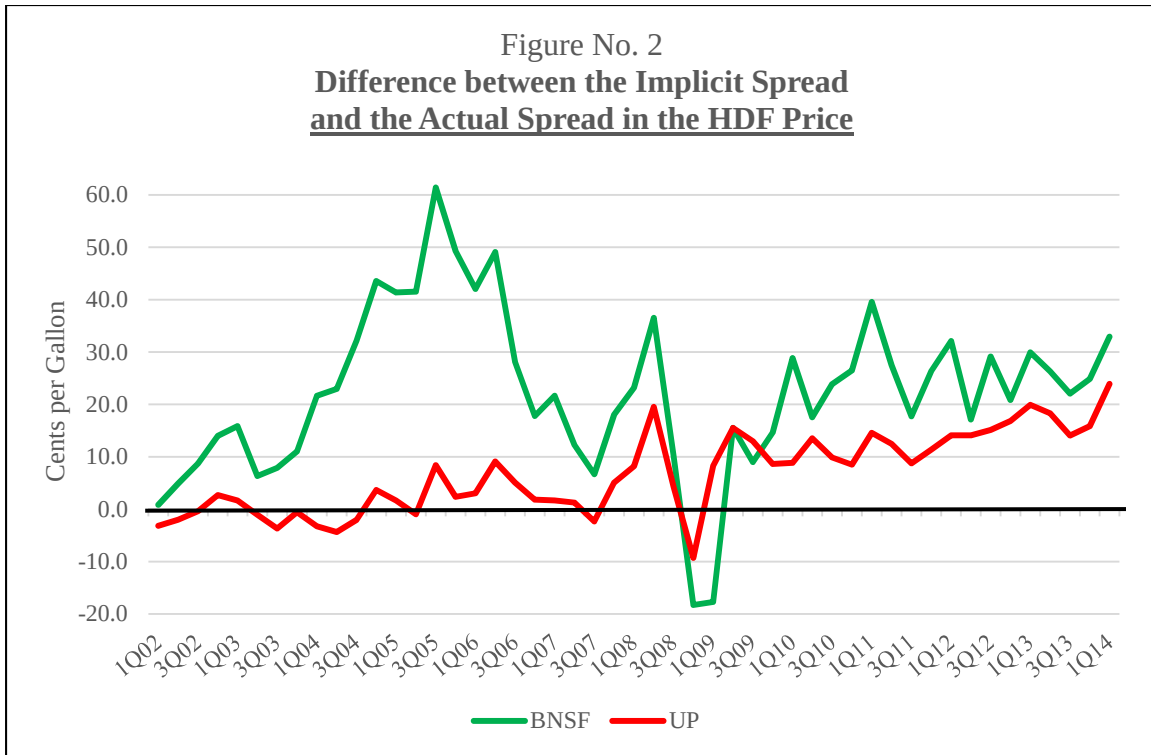


Figure No. 2 demonstrates that the differential between the implicit spread and the actual spread between HDF and railroad fuel prices is a moving target. This analysis shows visually the extent to which the railroads have been in a position to use—and in fact have used—the “Safe Harbor” provision to take advantage of the favorable spread.

Exhibit__(C/M-3) demonstrates how the railroads take advantage of the favorable price spread. For example, in 2011, the spread was actually \$0.798,²² while BNSF presumed it was \$0.52.²³ BNSF presumed that its fuel prices were \$0.278 per gallon greater than they actually were ($\$0.798 - \$0.52 = \$0.278$).²⁴ Based on BNSF’s surcharge programs step function—which purportedly represents its fuel consumption estimates—BNSF collected an additional \$0.069 per loaded car-mile in 2011 on carload traffic²⁵ and

²² See Exhibit__(C/M-3) at line 2, column (4).

²³ Id at line 1, column (4).

²⁴ Id at line 3, column (4).

²⁵ Id at line 5.a., column (4).

an additional \$0.046 per loaded car-mile on unit coal train traffic²⁶ in excess of its incremental fuel costs for all traffic subject to its fuel surcharge programs. This overcharge is due entirely to the Safe Harbor provision.

²⁶ Id at line 5.b., column (4).

**IV. THERE ARE SERIOUS PROBLEMS ASSOCIATED WITH
THE BOARD’S USE OF THE HDF INDEX AS A SAFE
HARBOR IN EVALUATING THE REASONABLENESS OF
FUEL SURCHARGE PROGRAMS**

As shown in Exhibit__ (C/M-3) and discussed above, reliance on the Safe Harbor has resulted in the Board’s misjudgment of the reasonableness of BNSF’s fuel surcharge program. As the Board acknowledged:

Performing its own examination of BNSF’s month-to-month incremental fuel costs over a five-year period, the Board determined that, as measured by the HDF Index, BNSF’s total incremental fuel costs for the traffic subject to the challenged fuel surcharge program only narrowly exceeded the fuel surcharge revenues BNSF collected on that traffic. The Board observed, however, that if BNSF’s incremental fuel costs were instead measured by the rail carrier’s internal fuel costs, BNSF’s fuel surcharge revenues would have exceeded its incremental fuel costs by \$181 million. This occurred because changes in the HDF Index did not precisely reflect changes in BNSF’s internal fuel costs. In particular, the “spread”—i.e., the overall difference between the average retail price per gallon as reflected in the HDF Index and the lower wholesale price per gallon actually paid by BNSF—increased significantly more than it decreased over the five-year analysis period.²⁷

The only reason for the Board’s finding that the BNSF’s actions were reasonable was that BNSF relied on the Board’s demonstrably flawed provision. The provision was drafted without the benefit of the data analysis that we have since conducted. Review of the circumstances that led to the adoption of the Safe Harbor provision provides important context.

²⁷ *Safe Harbor* at 2. Note that the Board’s language has the issue exactly backwards. A technically correct statement would read: “the Board determined that, as measured by the HDF Index, BNSF’s total incremental fuel costs for the traffic subject to the challenged fuel surcharge program [appear to have] only narrowly exceeded the fuel surcharge revenues BNSF collected on that traffic. The Board observed, however, that if BNSF’s incremental fuel costs were instead measured by the rail carrier’s internal fuel costs, BNSF’s fuel surcharge revenues ~~would have~~ [actually] exceeded its incremental fuel costs by \$181 million.”

The Board’s adoption of the Safe Harbor provision was informed by review of the historical correlation between HDF and railroad fuel prices. We have compiled the historical quarterly HDF prices and railroad fuel prices for the 1Q02 through 1Q14 time period. The data are shown in Exhibit__(C/M-4). Figure No. 3 below shows the same data graphically in a line chart.

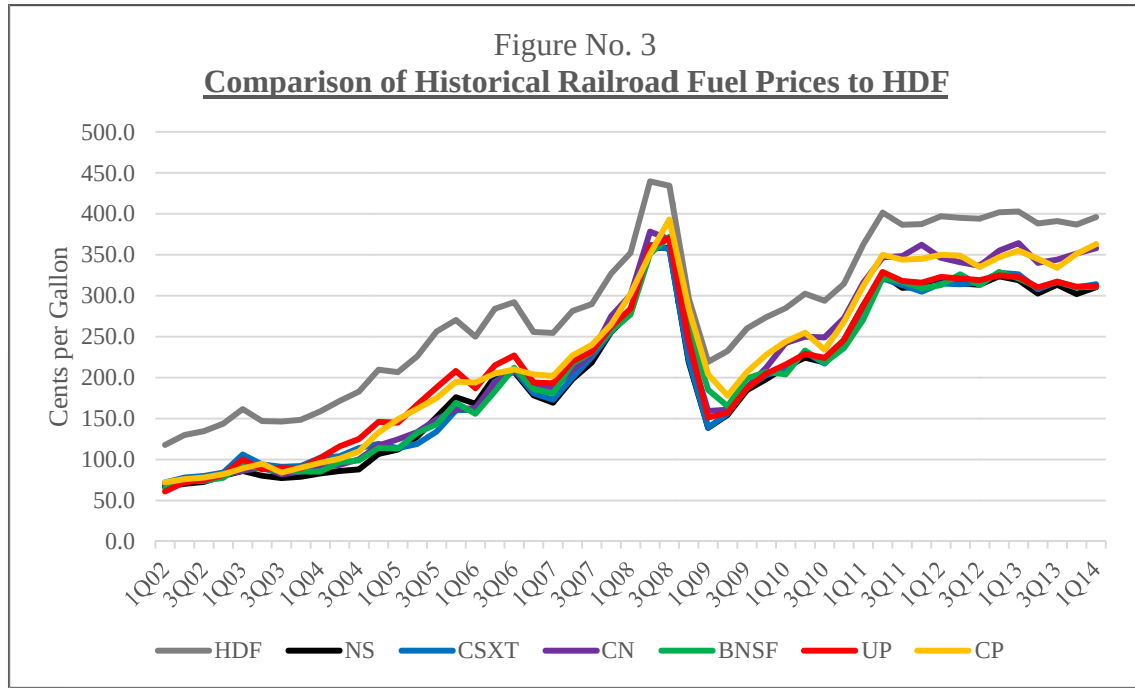


Figure No. 3 gives the impression that HDF and railroad fuel prices generally move in concert. In fact, HDF prices and railroad fuel prices are well-correlated over the 49-quarter observation period, as the R-squared statistic for the Class I railroads’ fuel price as compared to the HDF price ranges between 0.961 and 0.997. Absent any other context, the Board interpreted this to mean that one is a good substitute for the other. This interpretation, which is now demonstrably erroneous, is precisely what led to the implementation of the flawed “Safe Harbor” provision in the first place.

Prices for two commodities can have a perfectly positive linear correlation but increase/decrease in very different absolute amounts. In Table 1 below, we assume the

price of Commodity A in period 1 is twice the price of Commodity B. Over the 10 periods in the example, the Commodity prices increase at exactly the same rate, i.e., they are perfectly, positively correlated. However, the price differential between the two commodities changes dramatically as shown in Column (4).

Table 1 Example of Perfect Price Correlation and Between Commodities with Vastly Different Absolute Price Changes			
Period	Commodity A Price	Commodity B Price	Price Differential 1/
(1)	(2)	(3)	(4)
1	\$2.00	\$1.00	\$1.00
2	\$4.00	\$2.00	\$2.00
3	\$6.00	\$3.00	\$3.00
4	\$8.00	\$4.00	\$4.00
5	\$10.00	\$5.00	\$5.00
6	\$12.00	\$6.00	\$6.00
7	\$14.00	\$7.00	\$7.00
8	\$16.00	\$8.00	\$8.00
9	\$18.00	\$9.00	\$9.00
10	\$20.00	\$10.00	\$10.00
Minimum	\$2.00	\$1.00	\$1.00
Maximum	\$20.00	\$10.00	\$10.00
Average	\$11.00	\$5.50	\$5.50
1/ Column (2) minus Column (3).			

In Table 1 above, the price correlation between the two commodities is perfectly positive (a correlative coefficient = 1.0).²⁸ However, the price of Commodity B changes at one-half the rate of Commodity A. The slope of the linear relationship (measure of relative absolute change) is 0.5. That is, the linear relationship²⁹ can be expressed as follows:

²⁸ The strength of a linear correlation is measured by the correlation coefficient, which is equal to the covariance of the data sets divided by the individual standard deviations. A correlation coefficient of -1 implies a perfect negative linear association, while a correlation coefficient of 1 implies perfect positive linear association.

²⁹ Correlation provides a measure of the strength of any linear association between a pair of random variables, in which the random variables are treated symmetrically. In other words, we are indifferent in

$$\text{Commodity B Price} = (0.500 \times \text{Commodity A Price}) + 0.000$$

The relative change in Commodity A prices over time can be used as a proxy for the relative change in Commodity B prices, e.g., a \$1 increase in Commodity A will lead to a \$0.50 increase in Commodity B. However, the absolute change in Commodity A prices cannot be used as a proxy for the absolute change in Commodity B prices, e. g., a \$1 increase in Commodity A will not lead to a \$1 increase in Commodity B.

This same restriction holds for the use of HDF changes as a determinant for railroad fuel prices. For the studied period, the relative change in HDF prices over time may be viewed as a reasonable proxy for the relative change in railroad fuel prices.³⁰ However, despite the strong correlation between HDF prices and railroad fuel prices over the 49-quarter observation period, the absolute change in HDF fuel prices cannot be used as a proxy for the absolute change in railroad fuel prices.

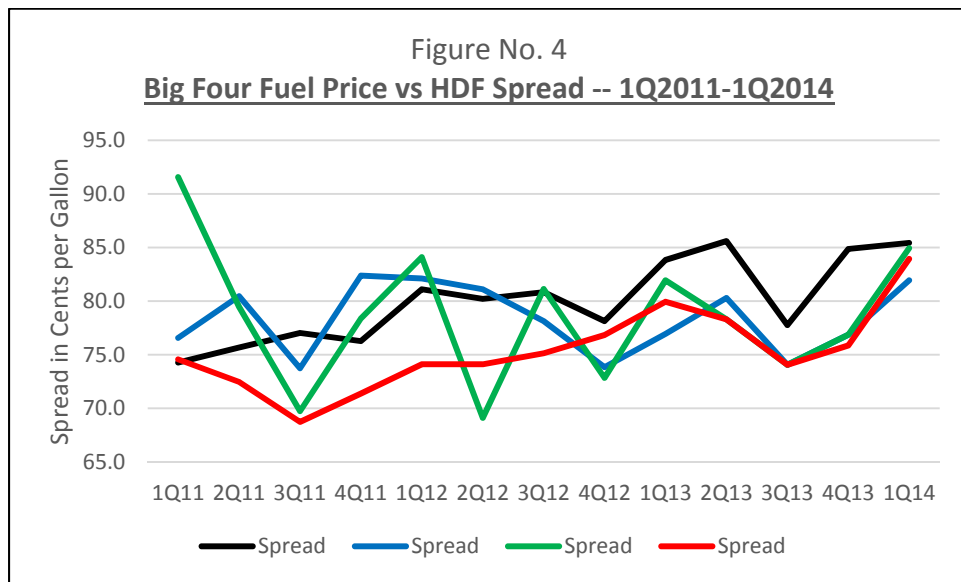
The railroads may claim that the spread between the HDF price and the railroad fuel prices has been relatively more stable since 2011 than it was between 2006 and 2010 (the *Cargill* analysis period), and attempt to use this as justification for continued use of HDF surrogates under the Safe Harbor provision. This position is flawed for two principal reasons. First, as shown in Figure No. 3 above, although the spreads have not fluctuated as wildly over the last three years as they had during the prior eight year period, they still were variable. For the 1Q11 through 1Q14 time period, the spread

speaking about the “correlation between A and B,” or the “correlation between B and A.” Placing the relationship in a linear format creates a dependent relationship, which does not necessarily have to be symmetric. In the example above, Commodity B is shown with a linear dependency on Commodity A. The same linear relationship would not hold if Commodity A was shown with a linear dependency on Commodity B. In other words, if Commodity B was the dependent variable and Commodity A was the independent variable, the slope would not be 0.5 but rather 2.0.

³⁰ However, even the use of this proxy is suspect, because there is no guarantee that the historical relationships between the various fuel prices will hold in the future.

between the HDF prices and BNSF fuel prices ranged from a low of 69 cents³¹ to a high of 92 cents,³² the spread between the HDF prices and UP fuel prices ranged from a low of 69 cents³³ to a high of 84 cents,³⁴ the spread between the HDF prices and CSXT fuel prices ranged from a low of 74 cents³⁵ to a high of 82 cents,³⁶ and the spread between the HDF prices and NS fuel prices ranged from a low of 74 cents³⁷ to a high of 86 cents.³⁸

Figure No. 4 below is an expanded portion of Figure No. 3 above, that shows the range of spread values for the four large Class I railroads (NS, CSXT, BNSF, and UP) over the 1Q11 through 1Q14 time period.



³¹ See Exhibit__(C/M-5) at line 42, Column (6).

³² Id at line 37, Column (6).

³³ Id at line 39, Column (7).

³⁴ Id at line 49, Column (7).

³⁵ Id at line 39, Column (4).

³⁶ Id at line 40, Column (4).

³⁷ Id at line 37, Column (3).

³⁸ Id at line 46, Column (3).

**V. REMOVAL OF THE SAFE HARBOR PROVISION SHOULD
BE ACCOMPANIED BY A BOARD ORDER DIRECTING
CARRIERS TO USE ACTUAL FUEL PRICES IN THEIR
FUEL SURCHARGE TABLES**

There simply is no reason or need for the railroads to rely on a surrogate to calculate the changes in their fuel prices. All of the railroads keep close track of their fuel expenses, and they all publish their fuel prices on a quarterly basis. There is absolutely no reason why the railroads could not publish their fuel price data on a monthly basis. If the railroads publish their monthly fuel price data, there is absolutely no reason to use a surrogate price index. The fuel surcharge programs would simply use the actual change in railroad fuel price to determine surcharge levels.

Furthermore, this simple change would eliminate two other related sources of opacity implicit in the current model. First, the railroads would implicitly disclose their strike-price in the updated fuel surcharge formulae. For example, if a railroad's fuel surcharge program begins at \$1.00 per gallon railroad fuel price, the shipper community would know that the railroad's base rates reflect an internal strike-price of \$1.00 per gallon. There would be no reason to guess what internal strike-price the railroad believes equates to the chosen HDF beginning price.

Second, there would be no ambiguity with respect to whether the railroads' stated equivalent HDF price is actually a fair estimate of the market equivalent. Despite BNSF and UP's public proclamations regarding the market snapshot that informed their assumptions regarding the assumed relationship between HDF and railroad fuel prices at a given point in time, the reasonableness of their assumptions has been shielded from challenge by the Board. Specifically, in *Cargill*, the shipper demonstrated based on analysis of historical data that BNSF's internal strike price of \$0.73 per gallon actually

corresponds to HDF prices greater than that used by BNSF in its fuel surcharge program during the historical time period when the relationship was set. For example, based on publicly available data, the BNSF fuel price in 2Q02 was \$0.731 per gallon,³⁹ and the average HDF price for that quarter was \$1.300 per gallon,⁴⁰ which equates to a spread of 57 cents per gallon, not BNSF's assumed 52 cents per gallon. Similarly, the average BNSF fuel price for the full year of 2002 was \$0.724 per gallon,⁴¹ and the average HDF price for that year was \$1.315 per gallon,⁴² which equates to a spread of 59 cents per gallon, not BNSF's assumed 52 cents per gallon. Based on these two observations, BNSF's implicit spread was understated by 5-to-7 cents from the start, giving BNSF a price advantage from the beginning of the fuel surcharge program. However, the Board's decision declared that the railroads' internal determination of the appropriate HDF price-equivalent (and by extension implicit spread) is discretionary and cannot be challenged for accuracy:

The choice of the strike price constitutes the rail carrier's representation to the public of the delineation between the base rate and fuel surcharge. If a rail carrier sets the strike price at zero, it has represented to the public that it intends to recover its entire fuel costs in the fuel surcharge; if the strike price is set at infinity (i.e., it has no fuel surcharge program), the rail carrier has represented to the public that it will recover its entire fuel costs in the base rate. By choosing a strike price of \$1.25, BNSF has informed the public that its base rates will cover all fuel costs where the HDF fuel price is less than \$1.25 per gallon, and that incremental fuel costs above \$1.25 per gallon will be recovered as a fuel surcharge. Our role in an unreasonable practice case is to assure that the rail carrier's representation is not deceptive, rather than to order the rail carrier to make a different representation. In the end, we leave the decision of the strike price to the discretion of the rail carrier. So long as its representation to the public is not deceptive and absent

³⁹ See Exhibit_(C/M-4) at line 2, column (6).

⁴⁰ See Exhibit_(C/M-4) at line 2, column (2).

⁴¹ See Exhibit_(C/M-4) average of lines 1-4, column (6).

⁴² See Exhibit_(C/M-4) average of lines 1-4, column (2).

evidence that the carrier has abused that discretion, we will not require a rail carrier to select a different strike point.⁴³

Cargill's challenge was not to BNSF's selection of \$1.25 as its HDF base price, it was to BNSF's assertion that \$1.25 HDF equated to the \$0.73 BNSF strike price in light of the fact that the data showed this relationship not to be as stated. Nonetheless, there would be no reason to guess whether the chosen HDF start price reasonably reflects (or ever truly reflected) the actual internal strike-price if the railroads simply used their own fuel prices in their fuel surcharge programs.

The railroads data collection and management systems are incredibly powerful and robust. The railroads should have no problem turning around their monthly fuel price data in short order after the close of a given month. This would enable a reduction in the lag that is built in to the current formulae as a result of a lag in data availability. The railroads could move to a one-month lag system rather than the current two-month lag system, which would likely lead to better alignment between incremental fuel costs and fuel surcharges.

Should the Board continue to sanction the railroads' use of HDF prices rather than move to a more transparent and logical system where the railroads surcharges are based on their own actual fuel costs, a less desirable alternative would be to run periodic regression analyses on the various railroad fuel prices relative to HDF and make adjustments to the fuel surcharge program curves to reflect the statistical relationships between the prices. This could be updated quarterly, semi-annually, or annually. This solution would make the programs more complicated and less transparent to shippers, and it would introduce another element of lag to the program.

⁴³ See *Cargill* at 16.

VI. THE PROBLEMS WITH THE SAFE HARBOR PROVISION FAR OUTWEIGH ANY PERCEIVED BENEFITS

The Safe Harbor provision creates a moral hazard for the railroads—it gives the railroads all the power to alter their programs when the spread is not favorable to them, and it gives them immunity from recourse should they decide to take advantage of favorable spreads. As the Board acknowledged:

The Board expressed concern that the safe harbor provision could give rail carriers an unintended advantage: if a rail carrier's internal fuel costs rise relative to HDF Index prices, the rail carrier could revise its fuel surcharge level upward to ensure that it fully recovers its incremental fuel costs; on the other hand, if a rail carrier's internal fuel costs declined relative to HDF Index prices (as happened to BNSF), the rail carrier could leave its fuel surcharge level in place, creating a spread and excessive revenues.⁴⁴

Under the Safe Harbor provision, shippers are rendered hostage to the railroads' discretion. History proves that the railroads are happy to take advantage of their favorable position—no railroad has publicly stated that it will revisit its fuel surcharge program construct in the aftermath of *Cargill*.⁴⁵ Fairness requires that the Safe Harbor provision be abolished.

⁴⁴ *Safe Harbor* at 3, citing *Cargill* at 17.

⁴⁵ BNSF rebased its fuel surcharge program, and CSXT will rebase its program as of January 1, 2015, but the program constructs remain the same (i.e., HDF-based programs with unchanged step-lengths.)

**VII. ELIMINATION OF THE SAFE HARBOR PROVISION DOES
NOT OBVIATE THE NEED FOR THE STB TO ACTIVELY
MONITOR AND REVIEW ALL ASPECTS OF THE
RAILROADS' FUEL SURCHARGE PROGRAMS**

As discussed above, there are two principal components of the railroads' fuel surcharge program formulae: (1) the fuel price determination; and (2) the presumed fuel consumption rate (or step function). We have shown why the use of HDF as a surrogate is undesirable and unnecessary, and identified a simple solution to the problems it creates—use the railroads' actual fuel prices rather than an estimate based on a demonstrably inaccurate surrogate in the fuel surcharge formula. That leaves the other parts of the fuel surcharge formula unaddressed.

**A. FUEL CONSUMPTION FACTORS
ARE OUTDATED**

The program step function reflects the railroads' presumption regarding the fuel consumption rate of the traffic group to which the programs are applied. For example, BNSF's unit coal train formula increases the surcharge by one cent per car-mile for every six-cent increase in the HDF fuel price per gallon, and BNSF's carload and Ag traffic formula increases the surcharge by one cent per car-mile for every four-cent increase in HDF fuel price per gallon. This means that BNSF believes it consumes one gallon of fuel for every six loaded car-miles for unit coal trains,⁴⁶ and one gallon of fuel for every four loaded car-miles for carload and Ag traffic.⁴⁷

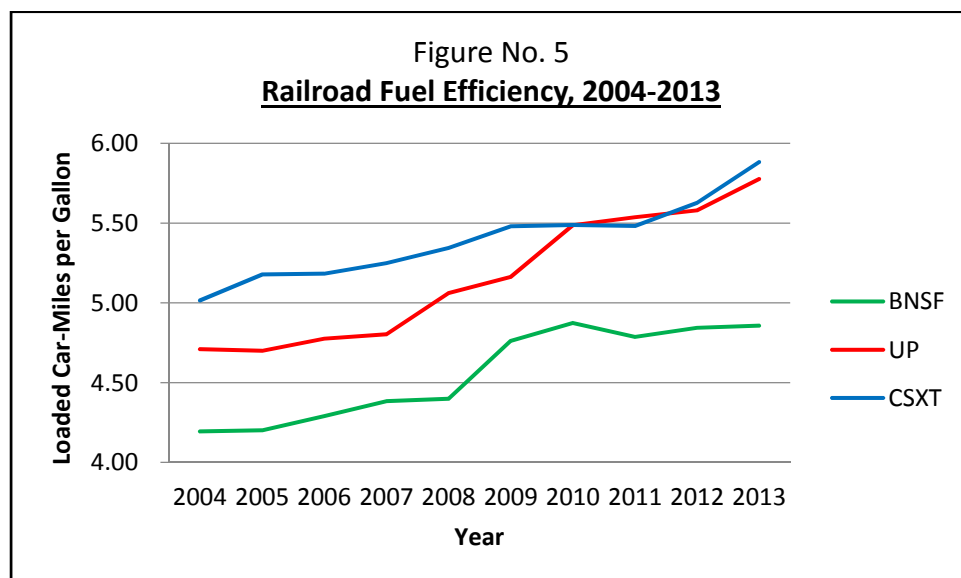
⁴⁶ If a carload moves 1,200 miles at a rate of 6 loaded miles per gallon, it consumes 200 gallons of fuel ($1,200 \div 6$). At 200 gallons, a \$1.00 per gallon price increase requires an additional \$200 in fuel expenses to move the carload the 1,200 miles. To recover the \$200 attributable to this carload, BNSF must recover \$0.167 per loaded car-mile ($1,200 \times \$0.167 = \200).

⁴⁷ If a carload moves 1,000 miles at a rate of 4 loaded miles per gallon, it consumes 250 gallons of fuel ($1,000 \div 4$). At 250 gallons, a \$1.00 per gallon price increase requires an additional \$250 in fuel expenses to move the carload the 1,000 miles. To recover the \$250 attributable to this carload, BNSF must recover \$0.25 per loaded car-mile ($1,000 \times \$0.25 = \250).

Even assuming the step function accurately approximated the railroads' fuel consumption rate for the applicable traffic group initially, the step function must be continually reviewed and updated to ensure that it captures improvements in fuel efficiency and changes in traffic mix that affect fuel consumption.

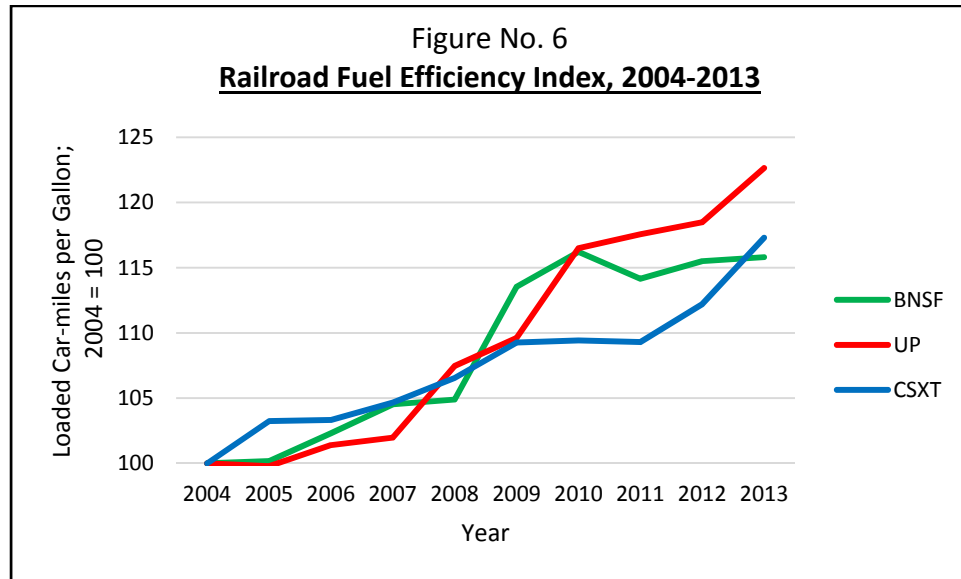
As discussed by Allied Shippers' counsel, the step functions in the carriers' fuel surcharge tables (which ostensibly reflect fuel consumption factors) were developed nearly a decade ago, and have not been changed by the carriers, despite dramatic increases in carrier fuel efficiency over the past decade.

Allied Shippers' Witness Thomas E. Johnson estimates that locomotive fuel efficiency has increased by approximately 20 percent over the past decade. This finding is supported by the railroads' Annual Report Form R-1 data. Specifically, Figure No. 5 below shows the increase in loaded car-miles per gallon of fuel consumed by BNSF, UP and CSXT as reported in their Annual Report Form R-1s over the last ten years.



As shown in Figure No. 5, BNSF's fuel efficiency improved from 4.19 to 4.86 loaded car-miles per gallon, UP's fuel efficiency improved from 4.71 to 5.78 loaded car-

miles per gallon and CSXT's fuel efficiency improved from 5.02 to 5.88 loaded car-miles per gallon between 2004 and 2013. In Figure No. 6 below, we restate the fuel efficiency gains on a 2004 equals 100 basis.



As shown in Figure No. 6, BNSF's fuel efficiency increased by 16 percent, UP's fuel efficiency improved by 23 percent, and CSXT's fuel efficiency improved by 17 percent as measured by system-wide loaded car-miles per gallon between 2004 and 2013.

For every one (1) percent increase in fuel efficiency, there should be a corresponding one (1) percent increase in fuel surcharge program step length. Using the rates of increase shown in Figure 6 above, we have developed a conservative estimate of the amount of fuel surcharge over recovery realized by BNSF, UP, and CSXT in 2013 as a result of the disconnect between the actual consumption rates realized by the railroads and the consumption rates implicit in their fuel surcharge programs.

As shown in Exhibit__(C/M-8), BNSF's failure to adjust its step lengths to reflect its fuel efficiency gains resulted in roughly \$150 million in over recovery in incremental fuel costs in 2013, UP's failure to adjust its step lengths to reflect its fuel efficiency gains

resulted in over \$180 million in over recovery in incremental fuel costs in 2013, and CSXT's failure to adjust its step lengths to reflect its fuel efficiency gains resulted in nearly \$130 million in over recovery in incremental fuel costs in 2013.

**B. CURRENT USE OF THE AII-LF
INDEX CREATES DOUBLE
RECOVERIES**

If a version of the current fuel surcharge model continues in the future, the railroads must adjust the way they apply the All-Inclusive Index Less Fuel ("AII-LF") to the base rates for shipments that are subject to the fuel surcharge programs. Specifically, the AII-LF cannot be applied to the entire base rate because such an application results in a double-recovery of fuel-related expenses.

Exhibit __ (C/M-7) is a hypothetical example showing the methodology used to develop the AII-LF index that is applied to the base rates by the railroads in concert with the application of the railroads' fuel surcharge programs. Exhibit __ (C/M-7) demonstrates how the standard application of the index results in systematic over-recovery of the fuel component of the base rates.

Specifically, Exhibit __ (C/M-7), Lines 1 through 9, Columns (2) through (4) demonstrate how the quarterly All-Inclusive Index ("AII") is calculated for two successive quarters based on the individual component weights and indices, and Column (5) demonstrates how the change in the quarterly AII is calculated. In this simplified example, each non-fuel component is assumed to increase by 5% from period 1 to period 2, while the fuel component increases by 10%. Based on the component weights, this results in a 6.6% increase in the quarterly AII from period 1 to period 2.

Exhibit __ (C/M-7), Lines 10 through 18, Columns (2) through (4) demonstrate how the quarterly AII-LF is calculated for two successive quarters based on the

individual component weights and indices, and Column (5) demonstrates how the change in the quarterly AII-LF is calculated. In this simplified example, each non-fuel component is assumed to increase by 5% from period 1 to period 2, while the fuel component is removed from the equation. Based on the component weights, this results in a 5.0% increase in the quarterly All-LF from period 1 to period 2.

Exhibit __ (C/M-7), Lines 10 through 18, Column (6) shows a hypothetical example of a railroad rate set to reflect a railroad's strike-price of \$1.25 per gallon. At this price level, the fuel component of the base rate is assumed to equal \$375 per carload,⁴⁸ and the entire base rate is assumed to equal \$1,875 per carload.⁴⁹ At Line 18, Column (7), the result of the railroads' current practice of escalating the base rate by the AII-LF is shown. Specifically, the entire base rate of \$1,875 per carload is increased by the AII-LF rate of 5.0%, which equals \$1,968.75 per carload ($\$1,875 \times 1.05 = \$1,968.75$). This practice, in conjunction with the railroad's fuel surcharge program, results in an over recovery of the incremental fuel costs incurred by the railroad.

All incremental fuel costs above the base rate fuel component level (\$375 per carload in this example) should be recovered through the fuel surcharge program. More specifically, the fuel component of the base rate should be held constant while the non-fuel components are escalated by the change in the AII-LF. The correct way to make the adjustment is shown in Columns (8) and (9). The total non-fuel components of the base rate equal \$1,500.⁵⁰ This amount should be escalated by the AII-LF index while the fuel component is held constant. When this is done, the non-fuel component is escalated to \$1,575 ($\$1,500 \times 1.05$) while the fuel component is held at \$375. The resulting adjusted

⁴⁸ See Exhibit __ (C/M-7) Line 11.

⁴⁹ Id Line 18.

⁵⁰ Id Line 17, column (6).

base rate is properly calculated to be \$1,950 ($\$1,575 + \$375 = \$1,950$).⁵¹ In this hypothetical example, the railroad is shown to have over-recovered \$18.75 per carload on the fuel component of the base rate by improperly adjusting it by the AII-LF. When coupled with the fuel surcharge program—which is meant to recover *all* incremental fuel costs in excess of the base rate fuel component—this amounts to a double-recovery of fuel costs. The Board should require carriers to stop applying the AII-LF index in the manner that results in this form of double-recovery.

**C. RAILROADS SHOULD DISCLOSE
THEIR BASE RATE FUEL
COMPONENT CALCULATION
PROCEDURES**

The only way to ensure transparency in the railroads' fuel surcharge programs is for the railroads to share critical information with the shipper community related to its fuel cost recovery practices. Specifically, in the current model, a portion of the railroads' fuel-related costs are recovered through the base rate, and the railroads represent to shippers that the fuel-related component of the base rate is calibrated to recover fuel costs at the strike-price level. It would be a simple, straight-forward exercise for the railroads to disclose their methodology for calculating the fuel-related component included their base rates.

Exhibit __ (C/M-7), Line 11 contains a simple example of how this could be done. In this hypothetical example, the railroad's strike-price is assumed to be \$1.25 per gallon, the railroad's fuel consumption rate is assumed to be five (5) loaded car-miles per gallon, and the example movement length of haul is assumed to be 1,500 miles. Dividing the length of haul by the consumption rate shows that the carload would consume 300

⁵¹ Id Line 18, column (8).

gallons of fuel (1,500 miles ÷ 5 loaded car-miles per gallon = 300 gallons). Multiplying the gallons consumed by the car by the fuel price would show that the base rate recovers \$375 in base fuel costs (300 gallons x \$1.25 per gallon strike price = \$375).

This is one example of a reasonable way for railroads to disclose to shippers and the Board exactly how much of their total fuel-related costs are collected through the base rate and how much of their total fuel-related costs are recovered through the surcharge.⁵² This simple way to improve transparency would give shippers and the Board a meaningful way to evaluate the extent to which base fuel costs actually reflect the railroads' strike-price fuel cost levels, rather than just taking the railroads' word for it as shippers and the Board are forced to do under the current model.

⁵² Obviously, the base fuel price actually used in setting the base rate must equal the strike price in the related fuel surcharge table. If it is not, the carrier will be impermissibly recovering the same fuel costs twice.

**VIII. THE BOARD HAS AN OBLIGATION TO KEEP CLOSE
WATCH OVER THE RAILROADS' FUEL SURCHARGE
PROGRAM PERFORMANCE AND ADJUST THE
PROGRAMS AS NECESSARY TO ENSURE PUBLIC
CONFIDENCE IN THE PROGRAMS**

In addition to requiring carriers to use actual prices in their fuel surcharge tables, the Board should take other actions to protect shippers from the railroads using their fuel surcharges as profit centers.

**A. ANNUAL FUEL CONSUMPTION
REPORTS**

The Board should require Class I carriers using fuel surcharge programs to make annual filings with the Board that would allow the Board to determine whether the fuel consumption factors in the railroads' fuel surcharge tables are accurate and up to date.

The railroads possess the data to generate reports that would reveal their actual fuel consumption rates by traffic group, which they could easily produce to the Board. Specifically, the railroads collect the mileage data for all carloads moving on their systems, and they collect the fuel consumption data for all locomotives moving on their systems. They also track the trains to which each car and locomotive is assigned, and categorize their trains by category. A simple report showing loaded car-miles and fuel consumption by train type would reveal the actual fuel consumption rates being achieved by the railroads for specific traffic groups. This data could be used to review the step functions to determine the actual consumption rates being achieved, and to ensure that the fuel surcharge is only recovering changes in fuel costs above the fuel costs recovered in base rates.

B. ANNUAL BASE RATE FUEL RECOVERY REPORTS

To further improve the transparency of the fuel surcharge programs, the railroads should also report the total aggregate amount of fuel they recover through their base rates. At present, the railroads report their total fuel expenses, their total fuel consumption, and their total fuel surcharge receipts. If they also reported their total base rate fuel recovery, the Board could evaluate the extent to which the railroads programs were over or under recovering their aggregate fuel expenses. Because the railroads ostensibly set their base rates to recover costs at a specific fuel strike price, they must possess the data to make such a reporting. As discussed above in Section VII, the process required to develop the base rate fuel component can be very simple. In the Section VII example, only three components are required: (1) the fuel strike-price, (2) up-to-date fuel consumption rate data and (3) the movement length of haul.

C. ANNUAL FUEL LEDGER BY TRAFFIC GROUP

Assuming the railroads expanded their reporting practices to include the simple and readily available additional statistics that we described above, shippers and the Board would have all the information required to evaluate the railroads fuel surcharge programs. To facilitate this review and evaluation, the railroads should produce a uniform and standard annual report that shows, by traffic group: (1) fuel consumption rates, (2) total fuel consumption, (3) fuel prices paid, (4) total fuel expenses, (5) fuel strike-price, (6) total base rate fuel recovery⁵³, (7) total fuel surcharges collected, and (8) total revenues.

⁵³ As discussed above, the Board should take related actions to insure that application of rate adjustment procedures like the AII-LF does not result in index-driven double recovery of incremental fuel cost increases.

Without this information, shippers can have no confidence that the railroads' fuel surcharge programs and practices are reasonably designed and applied.

The Board can impose some simple changes on the railroads fuel surcharge program structure, application, and reporting practices that will better align the programs' function with their stated purpose, and that will improve transparency and shipper confidence in the programs. These include: (1) the use of railroad fuel prices instead of HDF prices (this will eliminate the Safe Harbor problems and eliminate uncertainty with respect to whether the programs' HDF starting prices actually equate to the railroads' internal strike prices); (2) correcting the way the AII-LF index is applied to base rates to avoid double-recovery of incremental fuel costs; (3) periodic review and adjustment of the railroads' fuel consumption rates (step lengths) to ensure improvements in fuel efficiency are passed through to shippers; and (4) expanded reporting of fuel related statistics (consumption, expenses, and revenues) so the STB and shippers can evaluate the programs' performance in a meaningful way. The railroads collect and possess all data required to implement these straight-forward changes. The Board should embrace its responsibility to ensure that the programs perform the function that they are ostensibly designed to perform—to recover the actual incremental fuel costs incurred by the railroads above the amount of fuel-related expenses they recover through their base rates, and no more.

**IX. IN THE ABSENCE OF REQUIRED BOARD OVERSIGHT,
PERMANENT FUEL SURCHARGES SHOULD BE
ELIMINATED**

In lieu of effectively regulating carrier fuel surcharges, the Board should phase out the fuel surcharges altogether. Carriers would still have a means of recovering their fuel cost increases because they could apply indices like the RCAF to obtain full fuel cost recovery, as they did before the wide scale implementation of their fuel surcharge programs.

In the absence of the railroads' fuel surcharge programs, rates could be adjusted quarterly using the change in the STB approved Rail Cost Adjustment Factor, adjusted for productivity ("RCAF-A") index. The RCAF-A index is available a quarter ahead (e.g., the 3Q14 forecast index was available in June 2014), and has proven to be reliable over the years. Alternatively, the actual indices are available with a 3-month lag (e.g., the 1Q14 final index was available in June 2014.) This would result in a switch to quarterly adjustments rather than monthly adjustments, but the 2-month lag in the monthly adjustments raises questions about its responsiveness in the first place.

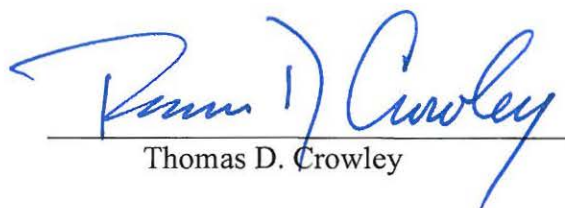
Furthermore, the RCAF index anticipated and was designed specifically to be adaptable to changing cost input frameworks. Specifically, the various expense component indexes that are combined to form the RCAF index are weighted according to their relative portion of overall expenses, and the weights are adjusted annually. Therefore, when fuel expenses become a relatively larger portion of total railway operating expense, relative to the other components that make up the RCAF index, the fuel component weight will increase and some or all of the other component weights will decrease, as the sum of all weighting factors always equals 1.00 in total.

Use of the RCAF index ensures that all fuel-related expenses will be effectively and efficiently recovered over time. In addition, if carriers perceive any problems with RCAF-based fuel recovery, the appropriate way to address those is through Board-approved changes to the RCAF, rather than through the use of effectively de-regulated fuel surcharge tariffs

If the STB continues to allow the use of fuel surcharge programs by Class I railroads, it must assume a more hands-on role. Alternatively, it could abolish the programs and phase in a return to periodic rate adjustments using the RCAF index for the very purpose for which the index was originally designed.

VERIFICATION

I, Thomas D. Crowley, verify under penalty of perjury that I have read this Verified Statement on behalf of the Western Coal Traffic League, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

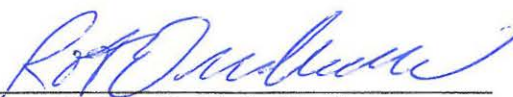


Thomas D. Crowley

Executed on August 4, 2014

VERIFICATION

I, Robert D. Mulholland, verify under penalty of perjury that I have read this Verified Statement on behalf of the Western Coal Traffic League, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Robert D. Mulholland

Executed on August 4, 2014

THOMAS D. CROWLEY
STATEMENT OF QUALIFICATIONS

My name is Thomas D. Crowley. I am an economist and President of the economic consulting firm of L. E. Peabody & Associates, Inc. The firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, Virginia 22314, 760 E. Pusch View Lane, Suite 150, Tucson, Arizona 85737, and 7 Horicon Avenue, Glens Falls, New York 12801.

I am a graduate of the University of Maine from which I obtained a Bachelor of Science degree in Economics. I have also taken graduate courses in transportation at George Washington University in Washington, D.C. I spent three years in the United States Army and since February 1971 have been employed by L. E. Peabody & Associates, Inc.

I am a member of the American Economic Association, the Transportation Research Forum, and the American Railway Engineering and Maintenance-of-Way Association.

The firm of L. E. Peabody & Associates, Inc. specializes in analyzing matters related to the rail transportation of all commodities. As a result of my extensive economic consulting practice since 1971 and my participation in maximum-rate, rail merger, service disputes and rule-making proceedings before various government and private governing bodies, I have become thoroughly familiar with the rail carriers that move coal over the major coal routes in the United States. This familiarity extends to subjects of railroad service, costs and profitability, cost of capital, railroad capacity, railroad traffic prioritization and the structure and operation of the various contracts and tariffs that historically have governed the movement of traffic by rail.

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As an economic consultant, I have organized and directed economic studies and prepared reports for railroads, freight forwarders and other carriers, for shippers, for associations and for state governments and other public bodies dealing with transportation and related economic problems. Examples of studies I have participated in include organizing and directing traffic, operational and cost analyses in connection with multiple car movements, unit train operations for coal and other commodities, freight forwarder facilities, TOFC/COFC rail facilities, divisions of through rail rates, operating commuter passenger service, and other studies dealing with markets and the transportation by different modes of various commodities from both eastern and western origins to various destinations in the United States. The nature of these studies enabled me to become familiar with the operating practices and accounting procedures utilized by railroads in the normal course of business.

Additionally, I have inspected and studied both railroad terminal and line-haul facilities used in handling various commodities, including unit train coal movements from coal mine origins in the Powder River Basin and in Colorado to various utility destinations in the eastern, mid-western and western portions of the United States and from the Eastern coal fields to various destinations in the Mid-Atlantic, northeastern, southeastern and mid-western portions of the United States. These operational reviews and studies were used as a basis for the determination of the traffic and operating characteristics for specific movements of numerous commodities handled by rail.

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I have frequently been called upon to develop and coordinate economic and operational studies relative to the rail transportation of various commodities. My responsibilities in these undertakings included the analyses of rail routes, rail operations and an assessment of the relative efficiency and costs of railroad operations over those routes. I have also analyzed and made recommendations regarding the acquisition of railcars according to the specific needs of various shippers. The results of these analyses have been employed in order to assist shippers in the development and negotiation of rail transportation contracts which optimize operational efficiency and cost effectiveness.

I have developed property and business valuations of privately held freight and passenger railroads for use in regulatory, litigation and commercial settings. These valuation assignments required me to develop company and/or industry specific costs of debt, preferred equity and common equity, as well as target and actual capital structures. I am also well acquainted with and have used the commonly accepted models for determining a company's cost of common equity, including the Discounted Cash Flow Model ("DCF"), Capital Asset Pricing Model ("CAPM"), and the Farma-French Three Factor Model.

Moreover, I have developed numerous variable cost calculations utilizing the various formulas employed by the Interstate Commerce Commission ("ICC") and the Surface Transportation Board ("STB") for the development of variable costs for common carriers, with particular emphasis on the basis and use of the Uniform Railroad Costing System ("URCS") and its predecessor, Rail Form A. I have utilized URCS/Rail form A

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costing principles since the beginning of my career with L. E. Peabody & Associates Inc. in 1971.

I have frequently presented both oral and written testimony before the ICC, STB, Federal Energy Regulatory Commission, Railroad Accounting Principles Board, Postal Rate Commission and numerous state regulatory commissions, federal courts and state courts. This testimony was generally related to the development of variable cost of service calculations, rail traffic and operating patterns, fuel supply economics, contract interpretations, economic principles concerning the maximum level of rates, implementation of maximum rate principles, and calculation of reparations or damages, including interest. I presented testimony before the Congress of the United States, Committee on Transportation and Infrastructure on the status of rail competition in the western United States. I have also presented expert testimony in a number of court and arbitration proceedings concerning the level of rates, rate adjustment procedures, service, capacity, costing, rail operating procedures and other economic components of specific contracts.

Since the implementation of the *Staggers Rail Act of 1980*, which clarified that rail carriers could enter into transportation contracts with shippers, I have been actively involved in negotiating transportation contracts on behalf of shippers. Specifically, I have advised shippers concerning transportation rates based on market conditions and carrier competition, movement specific service commitments, specific cost-based rate

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adjustment provisions, contract reopeners that recognize changes in productivity and cost-based ancillary charges.

I have been actively engaged in negotiating coal supply contracts for various users throughout the United States. In addition, I have analyzed the economic impact of buying out, brokering, and modifying existing coal supply agreements. My coal supply assignments have encompassed analyzing alternative coals to determine the impact on the delivered price of operating and maintenance costs, unloading costs, shrinkage factor and by-product savings.

I have developed different economic analyses regarding rail transportation matters for over sixty (60) electric utility companies located in all parts of the United States, and for major associations, including American Paper Institute, American Petroleum Institute, Chemical Manufacturers Association, Coal Exporters Association, Edison Electric Institute, Mail Order Association of America, National Coal Association, National Industrial Transportation League, North America Freight Car Association, the Fertilizer Institute and Western Coal Traffic League. In addition, I have assisted numerous government agencies, major industries and major railroad companies in solving various transportation-related problems.

In the two Western rail mergers that resulted in the creation of the present BNSF Railway Company and Union Pacific Railroad Company and in the acquisition of Conrail by Norfolk Southern Railway Company and CSX Transportation, Inc., I reviewed the railroads' applications including their supporting traffic, cost and operating data and

THOMAS D. CROWLEY
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provided detailed evidence supporting requests for conditions designed to maintain the competitive rail environment that existed before the proposed mergers and acquisition. In these proceedings, I represented shipper interests, including plastic, chemical, coal, paper and steel shippers.

I have participated in various proceedings involved with the division of through rail rates. For example, I participated in ICC Docket No. 35585, *Akron, Canton & Youngstown Railroad Company, et al. v. Aberdeen and Rockfish Railroad Company, et al.* which was a complaint filed by the northern and mid-western rail lines to change the primary north-south divisions. I was personally involved in all traffic, operating and cost aspects of this proceeding on behalf of the northern and mid-western rail lines. I was the lead witness on behalf of the Long Island Rail Road in ICC Docket No. 36874, *Notice of Intent to File Division Complaint by the Long Island Rail Road Company.*

ROBERT D. MULHOLLAND
STATEMENT OF QUALIFICATIONS

Mr. Mulholland is a Vice President of L.E. Peabody & Associates, Inc., an economic consulting firm that specializes in solving economic, marketing, and transportation problems. The Firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, VA, 22314, 760 E. Pusch View Lane, Tucson, AZ 85737 and 7 Horicon Avenue, Glens Falls, NY 12801.

Mr. Mulholland received a Bachelor's degree in Government & Legal Studies from Bowdoin College in 1995. In 2004, he received a Master's degree in Transportation Policy, Operations & Logistics from George Mason University's School of Public Policy. Mr. Mulholland was employed by L.E. Peabody & Associates, Inc. from 1995 through 2004 and rejoined the Firm in 2008.

Mr. Mulholland has directed and conducted economic studies and prepared reports for freight carriers, shippers, federal agencies, the U.S. Congress, and other public bodies dealing with freight transportation and related economic issues. As part of his work for L.E. Peabody & Associates, Inc., Mr. Mulholland has developed evidence containing base year traffic and revenue data and forecasts of those volumes and revenues for hypothetical stand-alone railroads in several Surface Transportation Board ("STB" or "Board") proceedings dealing with the calculation of maximum reasonable rail transportation rates for coal and chemical shippers. Mr. Mulholland has presented written testimony before the STB related to the inclusion of cross-over traffic and the development of revenue divisions for that traffic in rate reasonableness proceedings as part of an Ex Parte proceeding. He has presented written testimony before the Board related to proposed adjustments to the STB's Uniform Railroad Costing System ("URCS") model in an Ex Parte proceeding. Mr. Mulholland has developed evidence and

ROBERT D. MULHOLLAND
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presented written testimony containing fuel cost calculations for multiple commodities in an STB proceeding dealing with the determination of reasonable practices related to fuel surcharges.

Mr. Mulholland has conducted analyses of historical and forecasted rail transportation rates based on contract and tariff provisions and U.S. Government economic data for use in rail transportation contract negotiations. He has developed studies analyzing delivered fuel prices to electric utilities using Federal Energy Regulatory Commission ("FERC"), Energy Information Administration ("EIA"), and related data. Mr. Mulholland conducted studies forecasting the impact of the Union Pacific-Southern Pacific merger on shippers with reduced access to rail competition following the merger, and developed studies analyzing the impact of the 1997-1998 Union Pacific Railroad service crisis on system traffic flows and transit times. He has organized and directed multiple traffic operations and cost analyses in connection with rail facilities analyses and rate and revenue division analyses.

Mr. Mulholland developed a series of reports evaluating and critiquing the Federal Railroad Administration's ("FRA") benefit-cost analyses ("BCA") related to the implementation of Positive Train Control ("PTC") systems on the Class I carriers' rail systems. He has developed economic and operational studies relative to the rail transportation of coal, grain, chemicals, and crude oil on behalf of various shippers, including analyses of the relative efficiency and costs of railroad operations over multiple routes. He has supported the negotiation of transportation contracts between coal shippers and railroads. He has developed numerous variable cost calculations utilizing the various formulas employed by the STB for the

ROBERT D. MULHOLLAND
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development of variable costs for common carriers, with particular emphasis on the basis and use of the URCS model.

From 2004 to 2006, Mr. Mulholland directed the freight economics and freight infrastructure delivery programs for the Office of Freight Management & Operations of the Federal Highway Administration (“FHWA”). While employed at FHWA, Mr. Mulholland was a member of the United States Department of Transportation (“USDOT”) inter-agency working group that drafted the National Freight Policy. In addition, Mr. Mulholland served on the USDOT Freight Gateway Team, a group headed by the Undersecretary for Policy and composed of one representative from each of the surface modal agencies.

From 2006 to 2008, Mr. Mulholland was employed by ICF International, where he directed and conducted numerous analyses of the trucking and rail industries for Federal transportation agencies including the Federal Motor Carrier Safety Administration (“FMCSA”), the FRA, and the FHWA. His work included analyses of the current rail and trucking industries and forecasts of future trends in both industries.

Demonstration of Windfall Allowed Under STB's Safe Harbor Provision (Based on BNSF and UP Statistics)

Item (1)	Source (2)	BNSF					UP					
		2006-2010 (3)	2011 (4)	2012 (5)	2013 (6)	2011-2013 (7)	2006-2010 (8)	2011 (9)	2012 (10)	2013 (11)	2011-2013 (12)	
1. Assumed Static Spread	1/	\$0.520	\$0.520	\$0.520	\$0.520	\$0.520	\$0.600	\$0.600	\$0.600	\$0.600	\$0.600	
2. Actual Average Spread	2/	\$0.703	\$0.798	\$0.768	\$0.778	\$0.781	\$0.667	\$0.718	\$0.750	\$0.770	\$0.746	
3. Average Spread Advantage	3/	\$0.183	\$0.278	\$0.248	\$0.258	\$0.261	\$0.067	\$0.118	\$0.150	\$0.170	\$0.146	
4. Assumed Consumption Per Loaded Car-Mile (i.e. step length)												
a. Carload Program	4/	4	4	4	4	4	5	5	5	5	5	
b. Unit Coal Train Program	5/	6	6	6	6	6	6	6	6	6	6	
5. Average Overcharge Per Loaded Car-Mile												
a. Carload Program	6/	\$0.046	\$0.069	\$0.062	\$0.064	\$0.065	\$0.013	\$0.024	\$0.030	\$0.034	\$0.029	
b. Coal Train Program	7/	\$0.030	\$0.046	\$0.041	\$0.043	\$0.044	\$0.011	\$0.020	\$0.025	\$0.028	\$0.024	
6. Annual Volume - Carloads												
a. Carload Traffic	8/	xxx	2,554,000	2,720,000	2,830,000	8,104,000	xxx	3,001,000	3,127,000	3,213,000	9,341,000	
b. Coal Traffic	9/	xxx	2,309,000	2,172,000	2,230,000	6,711,000	xxx	2,164,000	1,871,000	1,703,000	5,738,000	
7. Average Haul - Miles												
a. Carload Traffic	10/	xxx	949	949	949	949	xxx	758	746	757	754	
b. Coal Traffic	10/	xxx	990	990	990	990	xxx	951	955	947	951	
8. Collective Overcharge @ 75% FSC program Coverage and Average Haul												
a. Carload Traffic	11/	\$181,000,000	14/	\$126,256,131	\$119,983,593	\$129,871,267	\$376,110,990	xxx	\$40,225,730	\$52,648,723	\$62,204,257	\$155,078,710
b. Coal Traffic	12/	xxx		\$79,400,377	\$66,646,881	\$71,186,650	\$217,233,907	xxx	\$30,312,095	\$33,595,657	\$34,354,743	\$98,262,494
c. Total	13/	xxx		\$205,656,508	\$186,630,473	\$201,057,916	\$593,344,897	xxx	\$70,537,825	\$86,244,379	\$96,559,000	\$253,341,205

1/ Based on BNSF EP661-1 statement that \$0.73 BNSF fuel strike-price is equivalent to \$1.25 HDF, or a static spread of \$0.52 per gallon.

and Based on UP EP661-1 statement that \$0.75 UP fuel strike-price is equivalent to \$1.35 HDF, or a static spread of \$0.60 per gallon.

2/ Simple averages based on reported BNSF and UP quarterly fuel prices and EIA monthly HDF data -- See Exhibit_(C/M-5), Col (6) for BNSF and Col (7) for UP.

3/ Line 2 - Line 1.

4/ BNSF Carload program increases fuel surcharge by \$0.01 per loaded car-mile for every \$0.04 increase in HDF per gallon above strike-price.

UP Carload program increases fuel surcharge by \$0.01 per loaded car-mile for every \$0.05 increase in HDF per gallon above strike-price.

5/ BNSF Unit Coal train program increases fuel surcharge by \$0.01 per loaded car-mile for every \$0.06 increase in HDF per gallon above strike-price.

UP PRB Unit Coal train program increases fuel surcharge by \$0.01 per loaded car-mile for every \$0.06 increase in HDF per gallon above strike-price.

UP Non-PRB Unit Coal train program increases fuel surcharge by \$0.01 per loaded car-mile for every \$0.05 increase in HDF per gallon above strike-price.

To be conservative, we applied the six-cent PRB step function to all UP coal shipments.

6/ Line 3 ÷ Line 4.a. (rounded down)

7/ Line 3 ÷ Line 4.b. (rounded down)

8/ BNSF Industrial plus Agricultural carloads included in BNSF Performance Reports

UP Industrial, Chemical, and Agricultural carloads included in UP Investor/Analyst Fact Book

9/ BNSF Coal carloads included in BNSF Performance Reports

UP Coal carloads included in UP Investor/Analyst Fact Book

10/ BNSF length of haul developed from QCS, Annual Report Schedule 755 and Shareholder Report data for 2009, the last year BNSF ton-miles data were published.

UP length of haul developed from QCS and UP Investor/Analyst Fact Book data for 2011-2013.

11/ Line 6.a. x 75% x Line 5.a. x Line 7.a.

12/ Line 6.b. x 75% x Line 5.b. x Line 7.b.

13/ Line 8.a. + Line 8.b.

14/ STB quantification.

Comparison of Historical Railroad Fuel Prices to Highway Diesel Fuel ("HDF") Price
(Cents per Gallon)

	Quarter (1)	HDF (2)	Railroad Fuel Prices						
			NS (3)	CSXT (4)	CN (5)	BNSF (6)	UP (7)	CP (8)	KCS (9)
1.	1Q02	117.8	67.1	72.0	70.9	65.0	61.0	72.0	NA
2.	2Q02	130.0	70.3	78.0	75.9	73.1	72.0	76.0	NA
3.	3Q02	134.6	72.7	80.0	77.4	73.9	75.0	78.0	NA
4.	4Q02	143.7	80.1	84.0	81.6	77.7	81.0	82.0	NA
5.	1Q03	161.7	85.9	106.0	86.1	93.8	100.0	89.0	NA
6.	2Q03	146.9	80.1	94.0	90.2	88.6	88.0	95.0	NA
7.	3Q03	146.3	77.4	91.0	81.9	86.4	90.0	84.0	NA
8.	4Q03	148.4	78.9	92.0	85.1	85.4	89.0	90.0	NA
9.	1Q04	158.7	83.1	102.0	91.1	85.1	102.0	96.0	NA
10.	2Q04	171.6	85.9	104.0	93.4	96.7	116.0	101.0	NA
11.	3Q04	183.0	87.9	114.0	100.2	98.8	125.0	110.0	NA
12.	4Q04	209.7	106.8	119.0	117.2	114.1	146.0	133.0	NA
13.	1Q05	206.7	112.2	114.0	124.7	113.3	145.0	149.0	NA
14.	2Q05	226.0	127.7	119.0	133.5	132.5	167.0	162.0	NA
15.	3Q05	256.4	151.8	134.0	149.0	143.0	188.0	175.0	NA
16.	4Q05	270.4	176.1	160.0	161.1	169.1	208.0	195.0	NA
17.	1Q06	250.0	168.0	161.0	162.8	156.0	187.0	194.0	NA
18.	2Q06	284.1	201.4	195.0	193.3	183.0	215.0	205.0	NA
19.	3Q06	292.1	207.1	209.0	207.8	212.0	227.0	210.0	NA
20.	4Q06	255.8	178.3	181.0	189.6	186.0	194.0	204.0	NA
21.	1Q07	254.7	169.4	173.0	186.0	181.0	193.0	202.0	NA
22.	2Q07	281.3	197.9	200.0	209.5	217.0	220.0	227.0	NA
23.	3Q07	289.7	218.4	225.0	228.8	231.0	232.0	240.0	NA
24.	4Q07	327.1	255.8	256.0	275.1	257.0	262.0	265.0	NA
25.	1Q08	352.2	278.8	282.0	300.9	277.0	284.0	302.0	NA
26.	2Q08	439.5	358.4	362.0	378.3	351.0	360.0	351.0	NA
27.	3Q08	434.3	358.8	357.0	368.8	372.0	370.0	393.0	NA
28.	4Q08	296.7	219.0	222.0	237.7	263.0	246.0	284.0	NA
29.	1Q09	219.3	138.7	139.0	159.2	185.0	151.0	204.0	NA
30.	2Q09	232.5	154.5	156.0	160.8	165.0	157.0	178.0	NA
31.	3Q09	260.0	184.8	188.0	187.9	199.0	187.0	207.0	NA
32.	4Q09	273.6	198.4	203.0	212.4	207.0	205.0	228.0	NA
33.	1Q10	284.8	213.0	211.0	242.2	204.0	216.0	244.0	NA
34.	2Q10	302.5	224.2	231.0	249.9	233.0	229.0	255.0	NA
35.	3Q10	293.9	218.5	217.0	249.1	218.0	224.0	234.0	NA
36.	4Q10	314.5	245.6	242.0	272.3	236.0	246.0	268.0	NA
37.	1Q11	362.6	288.3	286.0	315.8	271.0	288.0	312.0	NA
38.	2Q11	401.5	325.8	321.0	346.8	322.0	329.0	350.0	NA
39.	3Q11	386.7	309.7	313.0	348.3	317.0	318.0	344.0	NA
40.	4Q11	387.4	311.1	305.0	362.3	309.0	316.0	345.0	275.0
41.	1Q12	397.1	316.0	315.0	346.1	313.0	323.0	350.0	284.0
42.	2Q12	395.1	314.9	314.0	340.7	326.0	321.0	349.0	278.0
43.	3Q12	394.1	313.3	316.0	336.7	313.0	319.0	335.0	280.0
44.	4Q12	401.8	323.7	328.0	354.9	329.0	325.0	347.0	299.0
45.	1Q13	402.9	319.1	326.0	364.1	321.0	323.0	355.0	302.0
46.	2Q13	388.3	302.7	308.0	340.2	310.0	310.0	345.0	304.0
47.	3Q13	391.1	313.3	317.0	344.0	317.0	317.0	334.0	306.0
48.	4Q13	386.9	302.0	310.0	351.6	310.0	311.0	351.0	308.0
49.	1Q14	395.9	310.5	314.0	357.9	311.0	312.0	363.0	310.0
50.	R-Squared Values		0.988	0.978	0.975	0.974	0.997	0.979	NA
51.	2006-2010 Avg	296.9	219.5	220.5	233.6	226.7	230.3	244.8	NA
52.	2011 Avg	384.5	308.7	306.3	343.3	304.8	312.8	337.8	NA
53.	2012 Avg	397.0	317.0	318.3	344.6	320.3	322.0	345.3	285.3
54.	2013 Avg	392.3	309.3	315.3	350.0	314.5	315.3	346.3	305.0
2011-2014									
	Minimum	362.6	288.3	286.0	315.8	271.0	288.0	312.0	275.0
	Maximum	402.9	325.8	328.0	364.1	329.0	329.0	363.0	310.0
	Differential	40.4	37.5	42.0	48.3	58.0	41.0	51.0	35.0

Source: Quarterly Financial Reports published by the Railroads on their respective web pages.

**Spread Between Historical Railroad Fuel Prices and Highway Diesel Fuel ("HDF") Price
(Cents per Gallon)**

	Quarter (1)	HDF (2)	Actual Spread by Railroad 1/ NS CSXT CN BNSF UP CP KCS						(9)
			(3)	(4)	(5)	(6)	(7)	(8)	
1.	1Q02	117.8	50.7	45.8	47.0	52.8	56.8	45.8	NA
2.	2Q02	130.0	59.7	52.0	54.1	56.9	58.0	54.0	NA
3.	3Q02	134.6	61.9	54.6	57.2	60.7	59.6	56.6	NA
4.	4Q02	143.7	63.6	59.7	62.1	66.0	62.7	61.7	NA
5.	1Q03	161.7	75.8	55.7	75.5	67.9	61.7	72.7	NA
6.	2Q03	146.9	66.8	52.9	56.7	58.3	58.9	51.9	NA
7.	3Q03	146.3	68.9	55.3	64.4	59.9	56.3	62.3	NA
8.	4Q03	148.4	69.5	56.4	63.3	63.0	59.4	58.4	NA
9.	1Q04	158.7	75.6	56.7	67.7	73.6	56.7	62.7	NA
10.	2Q04	171.6	85.7	67.6	78.2	74.9	55.6	70.6	NA
11.	3Q04	183.0	95.1	69.0	82.8	84.2	58.0	73.0	NA
12.	4Q04	209.7	102.9	90.7	92.5	95.6	63.7	76.7	NA
13.	1Q05	206.7	94.5	92.7	82.0	93.4	61.7	57.7	NA
14.	2Q05	226.0	98.3	107.0	92.6	93.5	59.0	64.0	NA
15.	3Q05	256.4	104.6	122.4	107.4	113.4	68.4	81.4	NA
16.	4Q05	270.4	94.3	110.4	109.3	101.3	62.4	75.4	NA
17.	1Q06	250.0	82.0	89.0	87.2	94.0	63.0	56.0	NA
18.	2Q06	284.1	82.7	89.1	90.8	101.1	69.1	79.1	NA
19.	3Q06	292.1	85.0	83.1	84.3	80.1	65.1	82.1	NA
20.	4Q06	255.8	77.5	74.8	66.2	69.8	61.8	51.8	NA
21.	1Q07	254.7	85.3	81.7	68.6	73.7	61.7	52.7	NA
22.	2Q07	281.3	83.4	81.3	71.7	64.3	61.3	54.3	NA
23.	3Q07	289.7	71.3	64.7	60.9	58.7	57.7	49.7	NA
24.	4Q07	327.1	71.3	71.1	51.9	70.1	65.1	62.1	NA
25.	1Q08	352.2	73.4	70.2	51.3	75.2	68.2	50.2	NA
26.	2Q08	439.5	81.1	77.5	61.2	88.5	79.5	88.5	NA
27.	3Q08	434.3	75.5	77.3	65.5	62.3	64.3	41.3	NA
28.	4Q08	296.7	77.7	74.7	59.0	33.7	50.7	12.7	NA
29.	1Q09	219.3	80.6	80.3	60.1	34.3	68.3	15.3	NA
30.	2Q09	232.5	78.0	76.5	71.7	67.5	75.5	54.5	NA
31.	3Q09	260.0	75.2	72.0	72.1	61.0	73.0	53.0	NA
32.	4Q09	273.6	75.2	70.6	61.2	66.6	68.6	45.6	NA
33.	1Q10	284.8	71.8	73.8	42.6	80.8	68.8	40.8	NA
34.	2Q10	302.5	78.3	71.5	52.7	69.5	73.5	47.5	NA
35.	3Q10	293.9	75.4	76.9	44.8	75.9	69.9	59.9	NA
36.	4Q10	314.5	68.9	72.5	42.2	78.5	68.5	46.5	NA
37.	1Q11	362.6	74.3	76.6	46.7	91.6	74.6	50.6	NA
38.	2Q11	401.5	75.7	80.5	54.6	79.5	72.5	51.5	NA
39.	3Q11	386.7	77.0	73.7	38.4	69.7	68.7	42.7	NA
40.	4Q11	387.4	76.3	82.4	25.0	78.4	71.4	42.4	112.4
41.	1Q12	397.1	81.1	82.1	51.0	84.1	74.1	47.1	113.1
42.	2Q12	395.1	80.2	81.1	54.4	69.1	74.1	46.1	117.1
43.	3Q12	394.1	80.8	78.1	57.4	81.1	75.1	59.1	114.1
44.	4Q12	401.8	78.1	73.8	46.9	72.8	76.8	54.8	102.8
45.	1Q13	402.9	83.8	76.9	38.8	81.9	79.9	47.9	100.9
46.	2Q13	388.3	85.6	80.3	48.1	78.3	78.3	43.3	84.3
47.	3Q13	391.1	77.8	74.1	47.1	74.1	74.1	57.1	85.1
48.	4Q13	386.9	84.9	76.9	35.3	76.9	75.9	35.9	78.9
49.	1Q14	395.9	85.4	81.9	38.1	84.9	83.9	32.9	85.9
2002-2014									
50.	Minimum	117.8	50.7	45.8	25.0	33.7	50.7	12.7	78.9
51.	Average	282.5	78.7	75.4	62.1	74.4	66.8	54.7	99.5
52.	Maximum	439.5	104.6	122.4	109.3	113.4	83.9	88.5	117.1
2006-2010 Avg									
53.	2006-2010 Avg	296.9	77.5	76.4	63.3	70.3	66.7	52.2	NA
54.	2011 Avg	384.5	75.8	78.3	41.2	79.8	71.8	46.8	NA
55.	2012 Avg	397.0	80.1	78.8	52.4	76.8	75.0	51.8	111.8
56.	2013 Avg	392.3	83.0	77.0	42.3	77.8	77.0	46.0	87.3
2011-2014									
57.	Minimum	362.6	74.3	73.7	25.0	69.1	68.7	32.9	78.9
58.	Maximum	402.9	85.6	82.4	57.4	91.6	83.9	59.1	117.1
59.	Differential	40.4	11.3	8.6	32.4	22.5	15.2	26.2	38.2

1/ Exhibit_(C/M-4), Column (2) minus each railroad's quarterly fuel price in Columns (3) through (9), respectively.

Difference Between the Implicit Spread and the Actual Spread in the Highway Diesel Fuel ("HDF") Price
(Cents per Gallon)

Quarter (1)	HDF (2)	Railroad 1/ NS CSXT CN BNSF 1/ UP 2/ CP KCS (3) (4) (5) (6) (7) (8) (9)						
1. 1Q02	117.8	4/	5/	5/	0.8	-3.2	5/	6/
2. 2Q02	130.0	4/	5/	5/	4.9	-2.0	5/	6/
3. 3Q02	134.6	4/	5/	5/	8.7	-0.4	5/	6/
4. 4Q02	143.7	4/	5/	5/	14.0	2.7	5/	6/
5. 1Q03	161.7	4/	5/	5/	15.9	1.7	5/	6/
6. 2Q03	146.9	4/	5/	5/	6.3	-1.1	5/	6/
7. 3Q03	146.3	4/	5/	5/	7.9	-3.7	5/	6/
8. 4Q03	148.4	4/	5/	5/	11.0	-0.6	5/	6/
9. 1Q04	158.7	4/	5/	5/	21.6	-3.3	5/	6/
10. 2Q04	171.6	4/	5/	5/	22.9	-4.4	5/	6/
11. 3Q04	183.0	4/	5/	5/	32.2	-2.0	5/	6/
12. 4Q04	209.7	4/	5/	5/	43.6	3.7	5/	6/
13. 1Q05	206.7	4/	5/	5/	41.4	1.7	5/	6/
14. 2Q05	226.0	4/	5/	5/	41.5	-1.0	5/	6/
15. 3Q05	256.4	4/	5/	5/	61.4	8.4	5/	6/
16. 4Q05	270.4	4/	5/	5/	49.3	2.4	5/	6/
17. 1Q06	250.0	4/	5/	5/	42.0	3.0	5/	6/
18. 2Q06	284.1	4/	5/	5/	49.1	9.1	5/	6/
19. 3Q06	292.1	4/	5/	5/	28.1	5.1	5/	6/
20. 4Q06	255.8	4/	5/	5/	17.8	1.8	5/	6/
21. 1Q07	254.7	4/	5/	5/	21.7	1.7	5/	6/
22. 2Q07	281.3	4/	5/	5/	12.3	1.3	5/	6/
23. 3Q07	289.7	4/	5/	5/	6.7	-2.3	5/	6/
24. 4Q07	327.1	4/	5/	5/	18.1	5.1	5/	6/
25. 1Q08	352.2	4/	5/	5/	23.2	8.2	5/	6/
26. 2Q08	439.5	4/	5/	5/	36.5	19.5	5/	6/
27. 3Q08	434.3	4/	5/	5/	10.3	4.3	5/	6/
28. 4Q08	296.7	4/	5/	5/	-18.3	-9.3	5/	6/
29. 1Q09	219.3	4/	5/	5/	-17.7	8.3	5/	6/
30. 2Q09	232.5	4/	5/	5/	15.5	15.5	5/	6/
31. 3Q09	260.0	4/	5/	5/	9.0	13.0	5/	6/
32. 4Q09	273.6	4/	5/	5/	14.6	8.6	5/	6/
33. 1Q10	284.8	4/	5/	5/	28.8	8.8	5/	6/
34. 2Q10	302.5	4/	5/	5/	17.5	13.5	5/	6/
35. 3Q10	293.9	4/	5/	5/	23.9	9.9	5/	6/
36. 4Q10	314.5	4/	5/	5/	26.5	8.5	5/	6/
37. 1Q11	362.6	4/	5/	5/	39.6	14.6	5/	6/
38. 2Q11	401.5	4/	5/	5/	27.5	12.5	5/	6/
39. 3Q11	386.7	4/	5/	5/	17.7	8.7	5/	6/
40. 4Q11	387.4	4/	5/	5/	26.4	11.4	5/	6/
41. 1Q12	397.1	4/	5/	5/	32.1	14.1	5/	6/
42. 2Q12	395.1	4/	5/	5/	17.1	14.1	5/	6/
43. 3Q12	394.1	4/	5/	5/	29.1	15.1	5/	6/
44. 4Q12	401.8	4/	5/	5/	20.8	16.8	5/	6/
45. 1Q13	402.9	4/	5/	5/	29.9	19.9	5/	6/
46. 2Q13	388.3	4/	5/	5/	26.3	18.3	5/	6/
47. 3Q13	391.1	4/	5/	5/	22.1	14.1	5/	6/
48. 4Q13	386.9	4/	5/	5/	24.9	15.9	5/	6/
49. 1Q14	395.9	4/	5/	5/	32.9	23.9	5/	6/
50. Minimum	117.8	4/	5/	5/	-18.3	-9.3	5/	6/
51. Average	282.5	4/	5/	5/	22.4	6.8	5/	6/
52. Maximum	439.5	4/	5/	5/	61.4	23.9	5/	6/

1/ Values Represent the difference by railroad by quarter between the actual spread from Exhibit_(C/M-5) and the implicit spread in 2/ and 3/ below.

2/ BNSF claims a \$0.73 per gallon strike-price for its \$1.25 HDF equivalent programs (\$1.25-\$0.73=\$0.52 per gallon implicit spread).

3/ UP claims a \$0.75 per gallon strike-price for its \$1.35 HDF equivalent programs (\$1.35-\$0.75=\$0.60 per gallon implicit spread).

4/ NS uses WTI-based fuel surcharge programs.

5/ Public statements on implicit spread are not available.

6/ Insufficient data availability.

Hypothetical Example Showing the Impact of the Misapplication of the AII-LF Index Under the Current Fuel Surcharge Programs

										Overrecovery
Item	Total					Period 1	Period 2 Base Rate		Due to Current	
	Expenses	Period 1	Period 2	Period 2	Base Rate	Current	Corrected			
	Weight 1/	Index 1/	Index 1/	Change 2/	Components 1/	Application	Application			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		
All-Inclusive Index										
1. Labor	30.0%	400.0	420.0	5.0%	NA	NA	NA	NA		
2. Fuel	25.0%	400.0	440.0	10.0%	NA	NA	NA	NA		
3. Materials & Supplies	5.0%	240.0	252.0	5.0%	NA	NA	NA	NA		
4. Equipment Rents	5.0%	200.0	210.0	5.0%	NA	NA	NA	NA		
5. Depreciation	10.0%	220.0	231.0	5.0%	NA	NA	NA	NA		
6. Interest	5.0%	80.0	84.0	5.0%	NA	NA	NA	NA		
7. Other	20.0%	220.0	231.0	5.0%	NA	NA	NA	NA		
8. Total Non-Fuel	75.0%	3/ xxx	xxx	xxx	NA	NA	NA	NA		
9. Total	100.0%	4/ 312.0	5/ 332.6	5/ 6.6%	NA	NA	NA	NA		
All-Inclusive Index, Less Fuel										
10. Labor	40.0%	6/ 400.0	420.0	5.0%	\$600.00	xxx	xxx	xxx		
11. Fuel	xxx	7/ xxx	xxx	xxx	\$375.00	8/ xxx	\$375.00	9/ xxx		
12. Materials & Supplies	6.7%	10/ 240.0	252.0	5.0%	\$100.00	xxx	xxx	xxx		
13. Equipment Rents	6.7%	11/ 200.0	210.0	5.0%	\$100.00	xxx	xxx	xxx		
14. Depreciation	13.3%	12/ 220.0	231.0	5.0%	\$200.00	xxx	xxx	xxx		
15. Interest	6.7%	13/ 80.0	84.0	5.0%	\$100.00	xxx	xxx	xxx		
16. Other	26.7%	14/ 220.0	231.0	5.0%	\$400.00	xxx	xxx	xxx		
17. Total Non-Fuel	100.0%	15/ 282.7	5/ 296.8	5/ 5.0%	\$1,500.00	15/ xxx	\$1,575.00	16/ xxx		
18. Total	xxx	xxx	xxx	xxx	\$1,875.00	17/ \$1,968.75	16/ \$1,950.00	18/ \$18.75	19/	

1/ Assumed.

2/ $\{[\text{Column (4)} \div \text{Column (3)}] - 1\} \times 100$.

3/ Sum of Lines 1, 3-7.

4/ Sum of Lines 1-7.

5/ Weighted Average based on Column (2) weights.

6/ Line 1 $\div$ Line 8.

7/ Removed from consideration (Set to zero).

8/ Assumes 1500 loaded miles, 5 loaded car-miles per gallon, and \$1.25 per gallon railroad fuel strike price.

9/ Column (6) held constant per the railroads' stated intent.

10/ Line 3 $\div$ Line 8.

11/ Line 4 $\div$ Line 8.

12/ Line 5 $\div$ Line 8.

13/ Line 6 $\div$ Line 8.

14/ Line 7 $\div$ Line 8.

15/ Sum of Lines 10, 12-16.

16/ Column (6) $\times$ $[1 + \text{Line 17, Column (5)}]$.

17/ Sum of Lines 10 through 16.

18/ Line 11 + Line 17.

19/ Column (7) - Column (8).

Impact of Application of Dated Fuel Consumption Rates on Fuel Surcharge Program Revenues, 2013

<u>Item</u> (1)	<u>Source</u> (2)	<u>BNSF</u> (3)	<u>UP</u> (4)	<u>CSXT</u> (5)
1. 2013 HDF Price	Exhibit_(C/M-4)	\$3.923	\$3.923	\$3.923
2. Carload Base HDF Price	Railroads Program Tariffs, See notes	\$2.50	\$2.30 1/	\$2.00
3. Coal Base HDF Price	Railroads Program Tariffs, See notes	\$2.50	\$1.35 2/	\$2.00
4. Carload Implicit Consumption Rate (MPG)	Exhibit_(C/M-3)	4	5	4
5. Coal Implicit Consumption Rate (MPG)	Exhibit_(C/M-3)	6	6	4
6. 2013 Carload Steps	(Line 1 - Line 2) ÷ Line 4 x 100, Rounded up	36	33	49
7. 2013 Carload Fuel Surcharge	Line 6 x \$0.01, Except as noted	\$0.36	\$0.37 1/	\$0.49
8. 2013 Coal Steps	(Line 1 - Line 3) ÷ Line 5 x 100, Rounded up	24	43	49
9. 2013 Coal Fuel Surcharge	Line 8 x \$0.01, Except as noted	\$0.24	\$0.44 2/	\$0.49
10. 2004-2013 Fuel Efficiency Gain (per loaded car-mile)	Verified Statement Figure No. 6	16%	23%	17%
11. Carload Adjusted Consumption Rate (MPG)	Line 4 x (1 + Line 10)	4.64	6.15	4.68
12. Coal Adjusted Consumption Rate (MPG)	Line 5 x (1 + Line 10)	6.96	7.38	4.68
13. 2013 Adjusted Carload Steps	(Line 1 - Line 2) ÷ Line 11 x 100, Rounded up	31	27	42
14. 2013 Adjusted Carload Fuel Surcharge	Line 13 x \$0.01, Except as noted	\$0.31	\$0.31 1/	\$0.42
15. 2013 Adjusted Coal Steps	(Line 1 - Line 3) ÷ Line 12 x 100, Rounded up	21	35	42
16. 2013 Adjusted Coal Fuel Surcharge	Line 15 x \$0.01, Except as noted	\$0.21	\$0.36 2/	\$0.42
17. 2013 Per Car-Mile Overcharge, Carload Shipments	Line 7 - Line 14	\$0.05	\$0.06	\$0.07
18. 2013 Per Car-Mile Overcharge, Coal Shipments	Line 9 - Line 16	\$0.03	\$0.08	\$0.07
19. 2013 Carload Shipments	Exhibit_(C/M-3) and workpapers	2,830,000	3,213,000	3,495,441
20. 2013 Coal Shipments	Exhibit_(C/M-3) and workpapers	2,230,000	1,703,000	1,108,742
21. 2013 Carload Average Haul	Exhibit_(C/M-3) and workpapers	949	757	545
22. 2013 Coal Average Haul	Exhibit_(C/M-3) and workpapers	990	947	508
23. 2013 overcharge @75% FSC Program Coverage, Carload	Line 17 x 75% x Line 19 x Line 21	\$100,707,929	\$109,503,826	\$99,924,819
24. 2013 overcharge @75% FSC Program Coverage, Coal	Line 18 x 75% x Line 20 x Line 22	\$49,681,151	\$72,573,345 3/	\$29,548,974
25. 2013 overcharge @75% FSC Program Coverage, Total	Line 23 + Line 24	\$150,389,080	\$182,077,171	\$129,473,793

1/ \$0.05 at \$2.30 plus \$0.01 for every additional step. (See: http://www.uprr.com/customers/surcharge/index_mileage.shtml)

2/ \$0.02 at \$1.35 plus \$0.01 for every additional step per UP's SPRB Mileage Surcharge in Item 694 in UP 6603.

(See: <http://c02.my.uprr.com/wtp/pricedocs/UP6603BOOK.pdf>)

3/ The majority of UP coal shipments originate in the PRB.

The UP Non-PRB Coal train surcharge program kicks in at \$2.30 HDF (at \$0.05 per car-mile; implied kick-in of \$2.10 HDF).

The 2013 UP PRB Coal train surcharge over recovery was \$0.08 per loaded car-mile, as shown in Line 18.

The 2013 UP Non-PRB Coal train surcharge over recovery equals the caload over recovery of \$0.06 per loaded car-mile, as shown in Line 17.

To be ultra conservative, we applied the Non-PRB program over recovery of \$0.06 per loaded car-mile to all UP coal shipments.

**VERIFIED STATEMENT OF
THOMAS E. JOHNSON**

STB Docket No. EP 661 (Sub-No. 2)

My name is Thomas E. Johnson, P.E. I am President of Railroad & Metallurgical Engineering, Inc., an engineering consulting firm specializing in railroad operations, locomotive design and operations, accident reconstruction and matters related to engineering/failure analysis, new product development, and product liability. I have more than 30 years of locomotive-related experience in a variety of disciplines, including fuel consumption. My relevant experience is set out in more detail below.

The Western Coal Traffic League and allied shippers have asked me to address changes in locomotive fuel consumption efficiency since the rail industry began instituting fuel surcharges on the basis of changes in the Energy Information Administration's ("EIA") average retail on-highway diesel fuel prices ("HDF prices"), or other prices such as for West Texas Intermediate Crude Oil, approximately ten years ago. As explained below, railroad locomotives have become considerably more fuel-efficient over the past decade, and railroads have also instituted a variety of fuel saving measures ranging from automatic engine start/stop systems to extensive locomotive engineer training.

I. Qualifications

I have a Bachelor of Science degree in Metallurgical Engineering from the University of Minnesota. I am a licensed Professional Engineer (P. E.).

From 1981 through 1994, I was employed by GE Transportation Systems in Erie, Pennsylvania, a division of the General Electric Corporation that manufactures and sells

locomotives to the railroad industry. While at G.E., I worked in the Locomotive Engineering Department in positions that included Senior Metallurgist, Technical Leader-Component Design, Manager-Product Engineering, and Manager-Component Design and Product Engineering reporting to the Manager, Diesel Engine Operation.

As manager of Diesel Engine Design Engineering in GE's Locomotive Engineering Department, I was responsible for fuel consumption and emissions testing among other responsibilities. I managed many projects in those areas, including coordinating testing with the Class I railroads. I also managed various GE design engineering programs that included the design and field testing of locomotives with the Class I railroads, writing of Equipment and Material Specifications, introducing new product components, and performing failure analysis on components. While at GE, I introduced the electronic fuel injection systems (EFI), which has replaced mechanical fuel injection systems – a 5% fuel consumption improvement itself. During my GE years I also was responsible for continuing design improvements to the piston which included slowly eliminating piston rings from a 7 ring design to a three ring design which lowered fuel and oil consumption.

I studied event recorder downloads, fault logs, and data packs in working with the railroads to improve performance and reliability by reducing field failures. I have previously given presentations, seminars, papers and testimony in the areas of fuel consumption and emissions. I am familiar with the testing methods, measurements, and interpretation of fuel consumption results.

Since I began my engineering consulting practice in 1997, I have performed engineering consulting services for the Class I railroads, short line railroads, and rail shippers, including

evaluations of locomotive fuel consumption. I have been an advocate of various kinds of fuel additives that clean up the intake manifolds of hydrocarbon build up and coat the combustion chamber to help advance the timing and burn fuel more completely resulting in enhanced fuel economy. Towards those ends, I have worked with Vermont Rail (VTRR) on a program of fuel additives to decrease fuel consumption. We used fuel meters on locomotives and satellite (Lat-Lon) technology to gather data. We measured cumulative improvements to the duty cycle (amount of time spent in each throttle notch) of around 8% (meaning more time was spent in the low throttle notches which consume less fuel). Another program that I worked on was to assist a company selling aftermarket kits for fuel pump and injector rebuilds for BNSF yard locomotives in California. The engineering work involved materials and heat treatment. The timing of the notch firing was enhanced to get emissions reduced to EPA Tier 0 status. Originally, we were given a charge to improve the emissions with up to a 10% fuel penalty, but we were able to deliver the emission reductions and add a 2-3% fuel savings instead of a penalty.

I have taught engineering classes at Gannon University in Erie, PA, and I have been part of the adjunct faculty at the University of Wisconsin, in Madison, WI. In Wisconsin's graduate railroad programs and its operations classes, I taught locomotive operations performance sessions, which emphasized best practices for improving fuel economy and lowering emissions. The railroads have followed up with simulation training, field train handling measurements and incentives to lower fuel consumption.

Additional details of my experience are included as Exhibit 1 to this statement.

II. Changes in locomotive Fuel Consumption

The railroads have continuously improved locomotive fuel economy in a number of areas in the 10 years since the Class I railroads implemented their current fuel surcharge tables which provide for increasing surcharge amounts in cents per car mile as HDF prices (or comparable price measures) increase. Based on the information summarized below, I estimate that locomotive fuel efficiency has increased industry-wide by approximately 20 percent over the past decade – particularly with the highest-mileage road locomotives.

Improvements in locomotive fuel consumption rates over the past decade have occurred in three basic areas: locomotive design, locomotive mix, and locomotive operations (engineer training and measurement/train handling, duty cycle, and use of distributed power units). I address each of these areas below, as well as a general analysis of system-wide fuel-efficiency improvements.

A. Locomotive Design

During my career at GE, I became an expert in the design of diesel-electric locomotives, including the development of the AC4400, ES44AC and ES44DC locomotive models. These locomotives, along with EMD's SD70MAC and SD70ACe models, have become the standard for heavy duty Class I rail service over the past 10 to 12 years.

On January 1, 2005, GE introduced the Evolution Series locomotive into full production with a newly designed GEVO diesel engine that replaced the 7FDL design that GE had used (and continuously improved) from 1958 to 2004. The improvement in fuel economy with the Evolution Series over the 7FDL Dash-9 locomotive from the previous year was 5%, and the new locomotive models (such as today's ES44AC) use up to 17 percent less fuel compared with older

DC locomotive models.¹ Around the same time, EMD (the other major manufacturer of locomotives for the rail industry) optimized its 710 engine, which also led to significant fuel economy improvements.²

The improvements in fuel efficiency resulting from the introduction of these new AC locomotive models have been confirmed by the railroads themselves. For example, BNSF's website state that as each of its newest locomotives replaces an older unit, it does so for a 15 percent fuel-efficiency improvement over the locomotive it replaces.³

In addition to the introduction of these fuel-efficient locomotives over the past decade, the Class I railroads are actively investigating new alternative-fuel locomotive designs, including locomotives powered by propane, liquefied natural gas (LNG) and hydrogen.⁴ These new designs, along with other innovations including the Automatic Engine Start/Stop System and new radial truck designs described on EMD's website,⁵ have the potential to enhance fuel efficiency to a greater extent than introduction of the late-model diesel electric locomotives discussed in the preceding paragraphs.

The Genset locomotive is another way that railroads are reducing emissions while also saving on fuel which is a larger part of the strategy. The Genset locomotive is a switching locomotive design that incorporates multiple smaller diesel engines. By using multiple smaller

¹ *Progressive Railroading*, August 2009, *Locomotive Manufacturers Offer Information on their Fuel-Saving Models*.

² As reported by EMD in the same August 2009 article in *Progressive Railroading*, a new EMD SD70ACE or SD70-M locomotive can save nearly 250,000 gallons of fuel over its lifetime compared to locomotives produced as recently as five years previously.

³ See http://www.bnsf.com/communities/bnsf-and-the-environment/fuel_efficiency/.

⁴ See, e.g., *Progressive Railroading*, April 15, 2014, EIA report: Potential savings make LNG an attractive fuel option for railroads (available at <http://www.progressiverailroading.com/prdailynews/news.asp?id=40112>); http://www.up.com/aboutup/corporate_info/sustainability/preserve_environment/fuel_efficiency/index.htm and <http://bnsf.com/communities/bnsf-and-the-environment/alternative-fuels/>.

⁵ See http://www.emdiesels.com/emdweb/products/inno_index.jsp.

diesel engines and generators instead of one large single engine, the locomotive can achieve a better fuel consumption and emissions profile than a conventional locomotive. If a locomotive only generates the horsepower it needs at a given moment, it can shut down one or two of the other engines. Fuel is saved because the smaller diesel engines burn less fuel in a particular throttle notch setting than a larger engine would, for the same horsepower in a lower notch. Union Pacific created and pioneered Genset locomotive technology, and UP has more than 170 Genset locomotives in its fleet representing more than half of all Gensets in America. UP reports that its Genset yard switchers use as much as 30 percent less fuel compared to older switching locomotives.⁶ CSXT has added 30 Gensets to its locomotive fleet in the last five years, and reports that they are 25 percent more fuel efficient than the older switching locomotives they replaced.⁷

B. Locomotive Mix

The advent of the GE Evolution Series and EMD's SD70ACe locomotives in the 2005 time frame, with major fuel economy improvements, led the Class I railroads to embark on programs to replace older road units (such as the SD40, GP60, GP40 and GP38 locomotives, which today are used primarily by short lines and regional railroads and for switching in rail yards rather than in road-haul service) with these newer locomotive models. The change in locomotive mix by the four major Class I railroads over the last 10 years is as follows:⁸

⁶ See <http://www.up.com/newsinfo/chi-genset.shtml>.

⁷ See <http://www.csx.com/index.cfm/about-csx/projects-and-partnerships/fuel-efficiency>.

⁸ Source: Kerr, James W. 2013, The Official 2013 Edition Locomotive Roster & News.

<u>Railroad</u>	<u>Total Units – 2013</u>	<u>New Fuel Efficient Units - Post 2002</u>
BNSF	6,801	3,088 (45%)
UP	7,981	2,842 (36%)
CSXT	3,944	956 (25%)
NS	3,859	1,344 (35%)

As the data above shows, the push for more fuel-efficient locomotives has led to aggressive replacements of older units with the newer, fuel-efficient models. Moreover, the percentage of total locomotive unit-miles for the newer fuel-efficient units is sure to be significantly higher than the percentage of such units themselves compared to total units. This is because all of the Class I railroads use the newer units for long-haul road service to a far greater extent than older units. This translates to greater locomotive unit-miles and a much better fuel usage per locomotive unit-mile for the newer units. For example, in 2013, unit train traffic on BNSF represented 36 percent of all road locomotive unit miles, and such trains are almost always equipped with the latest, fuel-efficient, high-horsepower locomotives.⁹ In addition, BNSF and UP are well-known for using distributed power and the latest fuel-efficient locomotives on their high-priority intermodal trains that travel between California, Texas and Chicago.¹⁰

The locomotive mix has also been improved by the addition of fuel-efficient Genset units for switching service, as discussed above.

C. Operations (Crew Training and Measurements)

The Class I railroads have been aggressive in implementing fuel conservation plans that involve changes in operations and train handling that include limiting maximum train speeds

⁹ BNSF 2013 R-1, Schedule 755.

¹⁰ For example, such locomotives, in DP configuration, are shown in *Trains*, Nov. 2011, *The Future of Railroading Rides on a Highway*, pp. 25-31.

and reducing idling by shutting down the engines of unattended locomotives, with concomitant engineer-training programs focused on fuel conservation.

Railroad locomotive engineers today are trained using locomotive simulators. Train crews are taught to use best practices and improve their awareness of fuel-efficient train handling techniques and strategies. This includes use of the locomotive Event Recorder Automated Download (ERAD). Similar to a “black box” on an airplane, ERAD monitors and records actual train operations and is used to provide feedback to the engineers on how to improve fuel efficiency. For example, CSXT reports that using the ERAD program, it saved more than 19 million gallons of fuel between 2005 and 2009.¹¹ UP began using a similar technology, Locomotive Engineer Assist/Display and Event Recorder (LEADER), in 2012. UP states on its website that initial tests of LEADER showed a 3 percent improvement in fuel savings.¹²

In 2008, BNSF announced that it was “aggressively testing and implementing various brands of driver assist technology. Driver assist technologies display on a screen in the locomotive cab the best handling practice for optimum fuel savings.”¹³ BNSF has also implemented a Fuel MVP program that rewards employees that achieve greater fuel efficiency.¹⁴

One of the principal driver (engineer) assist technologies is GE’s Trip Optimizer system, which is now used extensively by BNSF, UP and CSXT. This is an easy-to-use control system that allows the crew or dispatcher to achieve on-time arrival with the lowest possible fuel use.

¹¹ See <http://www.csx.com/index.cfm/about-csx/projects-and-partnerships/fuel-efficiency>.

¹² See

http://www.up.com/aboutup/corporate_info/sustainability/preserve_environment/fuel_efficiency/index.htm.

¹³ See *Railway, The Employee Magazine of Team BNSF* at 4 (July/Aug. 2008).

¹⁴ See <http://www.progressiverailroading.com/mechanical/article/Class-Is-on-fuel-management-Good-to-the-last-drop--15344>

Optimal driving solutions are computed onboard and executed in closed loop using GPS-based navigation. Train and track parameters are adapted online to reduce model errors. The railroads, working with the locomotive manufacturers, have developed algorithms that take into account a number of freight trip variables such as train length, weight, grade, track conditions, weather, and locomotive performance. The resulting Trip Optimizer program leads the train to take an optimum route to its destination and run the train at the optimum speed and locomotive throttle notch setting to minimize fuel usage. GE has estimated that full utilization of this program cuts fuel usage by 3-17% (10% average).

The railroads have also developed procedures to eliminate unnecessary locomotive idling and thus reduce fuel consumption and emissions. The railroads have invested in two separate pieces of idle-reducing technology, Auxiliary Power Units (APUs) and Automated Engine Start Stop (AESS). APUs are separate, smaller diesel engines that provide auxiliary power to a locomotive, allowing the larger main diesel engine to be shut down. AESS acts similarly by automatically shutting the locomotive down when not in use and automatically starting it when needed.¹⁵ In addition to these systems, the railroads invest heavily in training their employees on proper locomotive shut-down procedures to eliminate unnecessary idling.

Finally, all of the Class I railroads have greatly increased the use of distributed power (DP) over the past 10 to 15 years. Distributed power is a locomotive configuration in which one or more of the locomotive units on a train are not directly connected to each other. Instead the DP unit(s) is placed at the rear of the train, or it might be “cut-in” to the middle of the train, or

¹⁵ In the same article cited in Footnote 12 above, BNSF stated that “[n]early 3,000 BNSF locomotives – more than half the fleet – have been equipped with an [AESS] upgrade, which shuts down idling locomotives more promptly. Over the next few months, the upgrades will be fully implemented throughout the locomotive fleet.” And that was in 2008; presumably BNSF has continued to make progress on replacing the older locomotives.

both. These locomotives are operated via radio link with the lead head end unit rather than by direct wire connection. Distributed power usually is used on longer road trains where the benefits of such power distribution can aid in the operating dynamics of the train and increase the number of cars that can be included in the train due to the increased horsepower capabilities and the ability of the DP unit to operate as a type of remote helper unit, with resulting savings in fuel efficiency in terms of fuel consumption per ton-mile for a given number of locomotives per train. It has been estimated that use of DP improves fuel consumption by 4 to 6 percent.¹⁶

D. Overall Railroad Fuel Economy Improvements

It is difficult to add up the improvements in locomotive fuel efficiency described above due to variances in statistical analysis, and because the improvements were independently measured from various sources. However, there are several ways to measure the overall effects of these incremental improvements. One way is to measure changes in revenue ton-miles per gallon of diesel fuel consumed. This number for all railroads has increased from 404 ton-miles per gallon in 2003 to 476 ton-miles per gallon in 2013 – an improvement of 18 percent.¹⁷ Individual railroads also report significant improvements in this metric; for example, according to UP's website UP's average net ton-miles per gallon of fuel consumed has grown from 375 ton-miles/gallon in 2000 to 471 ton-miles/gallon in 2013, an increase of 25.6 percent.¹⁸

¹⁶ See the August 2009 *Progressive Railroading* article cited in footnote 1 above.

¹⁷ Bureau of Transportation Statistics, 2014, Table 4-17: Class I Rail Freight Fuel Consumption and Travel (http://www.rita.dot.gov/bts/data_and_statistics/by_mode/rail.html).

¹⁸ See http://www.up.com/aboutup/corporate_info/sustainability/preserve_environment/fuel-efficiency/index.htm.

Another measurement of fuel efficiency is total gallons of fuel burned. During the 2003-2013 period, the actual total gallons of fuel burned by U.S. railroads dropped 3.5 percent (from 3,730 million gallons to 3,600 million gallons), notwithstanding a 20.5 percent increase in the size of the total locomotive fleet during the same period (the fleet grew from 20,506 units to 24,707 units. There was also a 20 percent drop in fuel burned per locomotive per year, from 181,900 gallons to 145,700 gallons.¹⁹

Overall, it is safe to say that the railroads have improved their locomotive fuel consumption efficiency by 20 percent or more over the last 10 years. This equates to about 2 percent per year.²⁰

¹⁹ Bureau of Transportation Statistics, 2014, Table 4-17: Class I Rail Freight Fuel Consumption and Travel (http://www.rita.dot.gov/bts/data_and_statistics([http://www.rita.dot.gov/bts/files/publications/national transpo rtation_statistics/html/table_04-17.html](http://www.rita.dot.gov/bts/files/publications/national_transpo rtation_statistics/html/table_04-17.html))).

²⁰ This is consistent with the experience reported by individual railroads. CSXT has stated: “We usually hit 1.5 to 2 percent in improved fuel efficiency each year”. See *Progressive Railroading*, March 2010, *Class Is employ fuel-saving practices that promise stingier diesel usage*. UP recently reported in its 2Q14 Earnings Call that it has experienced a 1% improvement of fuel consumption since 2Q13, even while pulling out “a fair number of stored locomotives that are not our most fuel-efficient locomotives” to deal with rail service problems. See http://seekingalpha.com/article/2339825?source=iphoneportfolioapp_email” at 5, 7 (Q&A).

VERIFICATION

I, Thomas E. Johnson, P.E., verify that I have read the foregoing Verified Statement, know the contents thereof, and that the same are true as stated to the best of my knowledge, information and belief. Further, I certify that I am qualified and authorized to file this Statement.


Thomas E. Johnson, P.E.

Executed on July 23, 2014.

Thomas E. Johnson, P.E.**Railroad & Metallurgical Engineering, Inc.**

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Curriculum Vitae

Experience

Railroad & Metallurgical Engineering, Inc. (1997 – Present)

An engineering consulting practice focused on metallurgical engineering & expert witness consulting in accident reconstruction, railroad litigation, product liability, failure analysis, railroad engineering, and new product development.

Principal Engineer and Consultant

- Assignments and litigation cases include:
 - FELA and OSHA injury investigations involving component failure analysis and event recorder download analysis, as well as locomotive/equipment operation evaluation, including inspection, maintenance, and overhaul procedures.
 - Accident reconstruction analysis involving: railroad equipment, trucks, automobiles, motorcycles, and pedestrians (determine the root cause and supporting evidence)
 - Performing train derailment investigations
 - Product liability investigations on a wide variety of system / component designs and materials including: locomotives / railcars (handbrakes, bearings, engines, wheels, axles, horns, shocks/coil springs, welds) and non-transportation equipment.
 - Metallurgical engineering of components in the steel, automotive, truck, and railroad industries. Analysis includes: material selection, mechanical properties, chemistry, heat treatment, and failure analysis.
 - Diesel-electric locomotive design and operation analysis, including: fuel consumption analysis, event recorder / fault log / data pack analysis, and rough-riding locomotive analysis.
 - Locomotive fuel consumption testimony before the Surface Transportation Board (STB) on a number of occasions, including analysis, calculations and fuel consumption.
 - Railroad equipment (locomotives, railcars, MOW) design and failure analysis including design drawing evaluation, as well as adherence to design specifications and maintenance/repair procedures.
 - Failure Analysis performed on a wide variety of transportation equipment as well as other components made out of metal materials.
 - Analysis of FRA, CFR, and GCOR rules and regulations and interpretation to determine adherence to these regulations.

CAREER EXPERIENCE, CONTINUED**Horton Inc., Minneapolis, MN (1994-1997)**

A \$90 MM, privately held company with almost 500 employees in three states. Divisions included Horton Industries Inc., a leading supplier of semi-truck fan clutches, and Horton Manufacturing Company Inc., a manufacturer of pneumatic clutches and brakes for industrial applications.

Vice President – R&D, Horton, Inc. (1996-1997)**Vice President – Engineering, Horton Industries (1994-1996)**

- Led product engineering efforts for current and new products for Horton Industries, then a \$60 MM division.
- Worked closely with the sales organization and customer accounts; orchestrated successful Effort to reduce warranty problems through improved product design.
- Managed budgets up to \$3.5MM; oversaw up to 30 people in Minnesota and South Dakota.

GE Transportation Systems, Erie, PA (1981 – 1994)

A \$2 billion manufacturer of railroad locomotives; Division of General Electric.

Manager – Component Design and Product Engineering (1993 – 1994)

- Reported to Manager, Diesel Engine Operation, with dual responsibility for engine Component design and product engineering.
- Direct reports included six design engineers, reliability engineer, senior material engineer, test lab supervisor, and 12 associates, fuel/lubrication specialist and five product engineers.

Manager – Product Engineering (1989 – 1993)

- Reported to Manager of Engine Engineering, responsible for all aspects of diesel engine Product engineering, reliability, and quality.
- Oversaw product change staff of 12 including engineering, manufacturing, purchasing Supplier, quality, and drafting.
- Conducted new component design reviews before Division Chief Engineer, including reviews of FEA models, strain gauge testing, prototype bench testing and field testing.

Technical Leader – Component Design (1987 – 1989)

- Reported to the Manager of Engine Engineering. Supervised three design engineers in two locations. Conducted failure investigation of reliability issues; coordinated design improvement through all stages of development.

CAREER EXPERIENCE, CONTINUED

Senior Metallurgist (1981 - 1987)

- Worked closely with vendors, purchasing, and supplier quality, involved in all manufacturing processes and material specification writing. Conducted materials analyses of failed components, in cooperation with customer service, marketing and railroad management.

The Bendix Corporation - Southfield, MI (1979-1981)

A supplier of automotive and truck components such as brakes and fuel pumps.

Senior Metallurgist - Engineering Development - Materials Department

The Chrysler Corporation, Highland Park, MI (1978 - 1979)

A major automotive manufacturer.

Materials Development Engineer - Cast Metal Laboratory and Steel Development Group

St. Paul Technical Vocational Institute, St. Paul, MN (1976-1978)

A community and technical college.

Instructor- Metallurgy and Testing Lab Classes

North Star Steel St. Paul, MN (1972-1976)

A supplier of raw structural steel. Subsidiary of Cargill, Inc.

Project Metallurgist - Quality Control

Education

University of Minnesota Institute of Technology

Bachelor of Science - Metallurgical Engineering (1974)

Graduate Metallurgical Engineering @ the University of Minnesota.

Graduate MBA Coursework @ Gannon University.

Credentials and Affiliations

- Licensed Professional Engineer (PE-033313E), (1984 – Present)
- Minnesota Society of Professional Engineers (1997 – Present)
- National Society of Professional Engineers (1997 – Present)
- Certified Accident Reconstructionist (2004 – Present)
- Accreditation Commission for Traffic Accident Reconstruction (ACTAR # 1517)
- Adjunct Faculty, Material Science, Gannon University (1983-1993)
- American Society for Metals (ASM) (1978-present)
- American Foundry Society (AFS) (1997 – Present)
- Society of Automotive Engineers (SAE) (1994 – Present)
- Certified OSHA General Industry Regulations (2011 – Present)
- Adjunct Faculty, University of Wisconsin – Madison (2008 – 2009)

Lectures and Publications

- “Derailment Investigation & Failure Analysis”, presented at the National Association of Railway Safety Consultants and Investigators, Indianapolis, IN, October 4-5, 2013
- “Locomotive Developments in Fuel Consumption, Emissions, & Hybrid Designs,” National Association of Railway Safety Consultants and Investigators, Chicago, IL, Sept. 20-21, 2012.
- “Locomotive & Equipment Investigations,” National Association of Railway Safety Consultants and Investigators, Minneapolis, MN, September 15-17, 2011.
- “Evidence Preservation Techniques”, presented at the National Association of Railway Safety Consultants and Investigators, Atlanta, GA, May 7, 2010.
- “Characteristics and Applications of Motive Power,” presented at Freight Railroads: Best Operating Practices, 3 Days at the University of Wisconsin – Madison, Sept 28 – 30, 2009.
- “Fire and Emergency Incidents (Railroads),” presented to the Sherburne County Sheriff’s Office and Fire Departments, July 23, 2009.
- “Characteristics and Applications of Motive Power,” presented at Freight Railroads: Best Operating Practices, 2 Days at the University of Wisconsin – Madison, Oct 21 – 22, 2008.
- “Railroad Accident Forensics and Investigation by Railroad Litigation Experts”, 16th Annual Convention of the Academy of Rail Labor Attorneys, Washington, DC, April 28, 2005.
- “Design and Handling of Remote Control Locomotives”, National Association of Railway Safety Consultants and Investigators, St. Louis, MO, May 6, 2005.
- “Diesel-Electric Locomotive Design Update”- Locomotive Design, Event Recorder Design, & Locomotive Fuel Consumption, National Association of Railway Safety Consultants and Investigators, St. Louis, MO, May 9, 2003.
- “Material Properties of Compacted Graphite Iron”, Cutting Tool Magazine, 2001.
- “Defense of Right of Way Fire Claims”, invited and presented at the AAR Fall Claims Conference, Hosted by Canadian National Railroad, Montreal, Canada, August 25-27, 1999.
- “Locomotive Design”, Annual Rail Seminar, National Association of Railway Safety Consultants and Investigators, Atlanta, GA, May 13-15, 1999.
- “Locomotive Design”, FELA Reporter Article, spring, 1998.
- Material Science for Engineers, BS Semester Course, Gannon University, Erie, PA 1985-1993.

Educational Training, Courses, Seminars and Conferences

- “Applied Physics for Collision Reconstruction”, MwATAI, Waterloo, Iowa, Nov. 11-15, 2013.
- “Annual Railroad Seminar,” National Association of Railway Safety Consultants and Investigators, Indianapolis, IN, October 4-5, 2013.
- “Annual Seminar”, Railway Interchange 2013, sponsored by RSI, AREMA, REMSA, & RSSI, Indianapolis, IN, September 29- October 2, 2013.
- “Annual Conference”, Midwest Regional Railroad Association, Alexandria, MN July 14-16, 2013
- “Annual Railroad Seminar,” National Association of Railway Safety Consultants and Investigators, Chicago, IL, September 20-21, 2012.
- “Derailment Causation Seminar”, American Short line & Regional Railroad Association (ASLRRRA), Teddy Maybrier, Minneapolis, MN, September 11-12, 2012
- “Regional Conference”, American Short line & Regional Railroad Association (ASLRRRA), Minneapolis, MN, September 9-11, 2012.
- “Annual Conference”, Midwest Regional Railroad Association, Two Harbors, MN, July, 2012.
- “Understanding and Complying with FRA213 Track Safety Standards”, University of Wisconsin-Madison, May 22, 2012.
- “CWR and Thermal Forces Workshop”, University of Wisconsin-Madison, May 21, 2012.
- “Annual Seminar”, Railway Interchange 2011, sponsored by RSI, AREMA, REMSA, & RSSI, Minneapolis, MN, September 18-21, 2011.
- “Annual Railroad Seminar,” National Association of Railway Safety Consultants and Investigators, Minneapolis, MN, September 15-17, 2011.
- “Failure Analysis,” Material Science Annual Seminar, American Society for Metals (ASM), Hennepin County Technical Center, Brooklyn Park, MN, February 23, 2011.
- “Human Factors for Traffic Accident Reconstruction,” The Crash Safety Research Center, Jeffrey W. Muttart, Amherst, MA, October 25 – 29, 2010.
- “Fall Technical Conference,” ASME Rail Transportation Division, Roanoke, VA, Oct 12, 2010.
- “Annual Railroad Seminar,” National Association of Railway Safety Consultants and Investigators, Atlanta, GA, May 6 – 7, 2010.
- “Forensic Engineering: Engineers as Expert Witnesses, Case Studies, and Ethics,” Minnesota Society of Professional Engineers course at University of St. Thomas, April 8, 2010.
- “Emerging Legal Issues for Engineers,” Minnesota Society of Professional Engineers course at St. Thomas University, March 24, 2010.
- “Material Selection,” American Society for Metals Annual Seminar, February 24, 2010.
- “Railroad Operations: Best Practices,” presented at University of Wisconsin – Madison, September 28 – 30, 2009.
- “LMOA & Air Brake Association Meetings,” Railway Supply Institute (RSI), Chicago, IL, September 16 – 18, 2009.

EDUCATIONAL TRAINING, CONTINUED

- “Corrosion,” Material Science Annual Seminar, American Society for Metals (ASM), Hennepin County Technical Center, Brooklyn Park, MN, February 18, 2009.
- “Railroad Operations: Best Practices,” presented at University of Wisconsin – Madison, October 21 – 22, 2008.
- “Railroad Forensics & Accident Investigation – CrashTeams Rail,” presented at CrashTeams Conference, Kamloops, BC, Canada, August 12 – 14, 2008.
- “Auto-Pedestrian Accident Investigation,” presented by West Coast Accident Reconstruction Equipment and Education (We CARE), Vallejo, CA, April 20 – 24, 2008.
- “Heat Treating,” Material Science Annual Seminar, American Society for Metals (ASM), Hennepin County Technical Center, Brooklyn Park, MN, February 27, 2008.
- ASME (American Society of Mechanical Engineers) – ICED Conference and Meeting, Charleston, SC, October 15-17, 2007.
- Railroad Engineering Course, University of Wisconsin Education and Training for the Rail Industry, Madison, WI, October 8-10, 2007.
- ASME (American Society of Mechanical Engineers) –RTD-RSI (Railway Supply Institute) Joint Rail Conference, Chicago, IL, September 11-14, 2007.
- ACTAR- The Midwest Association of Technical Accident Investigators (MATAI) Conference & Meeting, St. Paul, MN, May 15-18, 2007.
- Annual Rail Seminar, National Association of Railway Safety Consultants and Investigators, St. Louis, MO, May 3-4, 2007.
- 12th Annual Research Review, Transportation Technology Center (TTCI), & ASME Meeting, Pueblo, CO, March 11-15, 2007.
- Material Science Annual Seminar, American Society for Metals (ASM), Hennepin County Technical Center, Brooklyn Park, MN, February 28, 2007.
- Expert Witness Course, (SEAK), Chicago, IL, December 1-2, 2006.
- Crash Data Retrieval Course, Collision Safety Institute, Warsaw, IN, October 9-12, 2006.
- Locomotive Maintenance Officer’s Association Meeting (LMOA), & 98th Annual Convention and Technical Conference of the Air Brake Association, Railway Supply Institute (RSI), Chicago, IL, September 17-20, 2006.
- Rail 0107, Rail Accident Scene Investigation, British Columbia Institute of Technology (BCIT), Vancouver, Canada, September 11-13, 2006.
- 11th Annual Research Review, Transportation Technology Center (TTCI), Pueblo, CO, March 14-15, 2006.
- Material Science Annual Seminar, American Society for Metals, Hennepin County Technical Center, Brooklyn Park, MN, February 22, 2006.
- Annual Rail Seminar, National Association of Railway Safety Consultants and Investigators, St. Louis, MO, May 5-6, 2005.
- “Design of Railway Track Systems”, University of Wisconsin Education and Training for the Rail Industry, Rolling Meadows (Chicago), Illinois, May 4-5, 2005.

EDUCATIONAL TRAINING, CONTINUED

- “North American Rail Mechanical Operations Seminar”, Association of American Railroads, March 28-30, 2005.
- Material Science Annual Seminar, American Society for Metals, Hennepin County Technical Center, Brooklyn Park, MN, February 23, 2005.
- 11th Annual Rail Liability Seminar, Railroad Defense Bar, Milwaukee, WI, July 15-16, 2004.
- Locomotive Maintenance Officer’s Association Meeting, & 96th Annual Convention and Technical Conference of the Air Brake Association, (LMOA), Railway Supply Institute, Chicago, IL, September 26-29, 2004.
- Passed ACTAR Exam for full accreditation as a Certified Traffic Accident Reconstructionist, Accreditation Commission for Accident Reconstruction, May 28, 2004. ACTAR # 1517.
- Accident Reconstruction II, ACTAR Certification Course, Northwestern University Transportation Institute, Evanston, IL, April 12-23, 2004. I passed the Exam on April 23, 2004.
- Accident Reconstruction I, ACTAR Certification Course, Northwestern University Transportation Institute, Evanston, IL, April 26-30, 2004. I passed the Exam on April 30, 2004.
- Material Science Annual Seminar, American Society for Metals, Hennepin County Technical Center, Brooklyn Park, MN, February 25, 2004.
- Rail Transit Engineering Seminar, University of Wisconsin Education and Training for the Rail Industry, Madison, WI, February 9-10, 2004.
- “Annual Proceedings of the International Association of Railway Operating Officers, Railway Supply Institute, September 22-24, 2003.
- “95th Annual Convention and Technical Conference of the Air Brake Association, Railway Supply Institute, September 22-24, 2003.
- Annual Meeting and Seminar, American Short Line and Regional Railway Association (ASLRRA), Philadelphia, PA, May 18-20, 2003.
- Annual Rail Seminar, National Association of Railway Safety Consultants and Investigators, St. Louis, MO, May 9-10, 2003.
- Material Science Annual Seminar- “Stainless Steels & Super Alloys”, American Society for Metals, Hennepin County Technical Center, Brooklyn Park, MN, February 26, 2003.
- Failure Analysis Course @ Materials Evaluation and Engineering, Inc., American Society for Metals, Plymouth, MN, November 2-4, 2002.
- Locomotive Maintenance Officer’s Association Meeting, & 94th Annual Convention and Technical Conference of the Air Brake Association, (LMOA), Railway Supply Institute, Chicago, IL, September 22-25, 2002.

Thomas E. Johnson, P. E.

January, 2014