

ASSOCIATION
OF AMERICAN
RAILROADS

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March 18, 2014

The Honorable Cynthia T. Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

Dear Ms. Brown:

This submission is the AAR forecast of the second quarter 2014 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2014-2) *Quarterly Rail Cost Adjustment Factor*. The versions of RCAF-related indices covered in this filing are: the All-Inclusive Index (initiated in the second quarter of 1985), the Unadjusted RCAF (produced since October 1982), the Adjusted RCAF (first published in the second quarter of 1989), and the RCAF-5 (created by the STB in its Ex Parte No. 290 (Sub-No. 7) decision served October 3, 1996). The table below summarizes the second quarter 2014 results on the fourth quarter 2012 base, revised in the 2014Q1 filing, and shows the percentage changes from the previous quarter.

	<u>2014Q1r</u>	<u>2014Q2</u>	<u>% Change</u>
All-Inclusive Index	98.5	99.7	1.2
Preliminary RCAF	0.985	0.997	1.2
Forecast Error Adjustment	-0.004	-0.022	
RCAF (Unadjusted)	0.981	0.975	-0.6
Productivity Adjustment Factor	2.3110	2.3168	
RCAF (Adjusted)	0.424	0.421	-0.7
PAF-5	2.4480	2.4534	
RCAF-5	0.401	0.397	-1.0

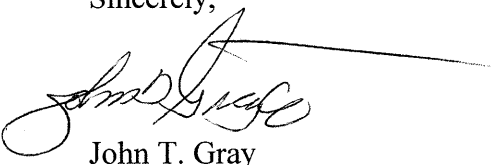
In its October 3, 1996 decision in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation*, the STB noted its intent to publish, in addition to the RCAF (Unadjusted) and RCAF (Adjusted), an RCAF-5 (i.e., a calculation of the productivity adjusted RCAF values as if the agency had always used a 5-year rolling average to calculate the productivity adjustment). In response to a request by STB staff, the AAR is including a calculation of the RCAF-5 in its quarterly RCAF filing. The AAR and its members, however, do not believe the publication of a third RCAF index is required or permitted by the applicable statute (49 U.S.C. § 10708) and do not endorse its publication.

As directed by the Board in its March 12, 2014, decision, the AAR has resubmitted its 2014Q2 calculation using revised annual report data received February 27 and March 7, 2014. **This filing replaces the entire filing (and work papers) dated March 5, 2014.** Since Federal Offices in the Washington area were closed (because of a snowstorm) on March 17, we are filing on March 18, 2014.

Our recalculations revealed no changes to the Interest Index component for 2011 or 2012, no changes for the internal weights used by the Labor Index component for 2011 or 2012, no changes for the internal weights used by the Equipment Rents Index component for 2011 or 2012, no changes to the Labor benchmarks for 2011 or 2012, no changes to external weights for 2011, and no changes to the 2012Q4=100 basing factor. However, the revised data caused the external weights for 2012 to change. Thus, the only quarters that could be affected by the revised annual report data are 2013Q4, 2014Q1, and 2014Q2. Revised RCAFs are listed in Appendix AA, and the Introduction on page 1 provides more background.

Our quarterly non-proprietary work papers underlying this submission are e-filed herewith, in accordance with the ICC's order in Ex Parte No. 290 (Sub-No. 2), *Railroad Cost Recovery Procedures*, served February 8, 1990. We have notified Paul Aguiar, in the STB office handling this proceeding, of our plan to e-file the submission and non-proprietary work papers. A second copy of the submission and non-proprietary work papers, plus selected highly confidential work papers, will be hand-delivered to a member of Mr. Aguiar's Data Collection and Auditing Team. All work papers are available for STB inspection. Questions should be directed to me or Clyde Crimmel (202 639-2309) of this office.

Sincerely,



John T. Gray

Attachments

**Second Quarter 2014
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2014-2)

**Quarterly Rail Cost Adjustment Factor
Surface Transportation Board**

**Policy and Economics Department
Association of American Railroads**

March 18, 2014

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Introduction

On January 2, 1985, the Interstate Commerce Commission (ICC) [now the Surface Transportation Board (STB)] adopted the All-Inclusive Index of Railroad Costs as the basis for the Rail Cost Adjustment Factor (RCAF). The quarterly projection of railroad costs, as documented herein, employs the All-Inclusive Index as required by the regulations. Also presented in this submission is the RCAF, both Adjusted and Unadjusted, as required by the ICC in its decision in Ex Parte No. 290 (Sub-No. 4), *Rail Cost Recovery Procedures - Productivity Adjustment*, served March 24, 1989. In addition, the AAR has included (but does not endorse) the RCAF-5, which was instituted by an STB decision served October 3, 1996 in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation*. This quarter's projection of railroad costs is for the second quarter 2014.

On March 4, 2014, the Surface Transportation Board served a decision that updates the five-year moving average for changes in railroad productivity. The AAR has utilized this decision in this filing, although the effective date for the decision is March 19, 2014

On February 27, 2014, the AAR received annual report revisions from one railroad for 2011 and 2012. Additional revisions from the same railroad were received on March 7, 2014. The AAR did not use the revisions in its March 5 submission because it did not have enough time to incorporate all of the annual report changes in its database, and recalculate benchmarks, weights, and index components that could be affected. The revisions had the potential to change the All-Inclusive Index (and RCAF) as far back as fourth quarter 2012. The fourth quarter basing factor could also be affected. In a decision served March 12, 2014, the Surface Transportation Board ordered the AAR to re-file its second quarter 2014 (March 5) RCAF submission and use the Annual Report Form R-1 revisions in all calculations. This **March 18 submission replaces the March 5 version**, and utilizes all annual report revisions available at this time.

The revisions to the 2011 annual report had no impact on weights, benchmarks, or component indices. This also meant that the 2012Q4=100 basing factor did not change. Thus, All-Inclusive Indexes and RCAFs for 2012Q4 through 2013Q3 were not affected by revisions. The revisions to the 2012 annual report causes small changes to the 2012 weights, but did not cause any changes to benchmarks or component indices. Although this caused small changes in the All-Inclusive Indexes, only a few versions of the RCAF were affected. A summary of revisions is provided in Appendix AA.

Index Weights

In the Ex Parte No. 290 (Sub-No. 2) final rules, issued in April 1981, the Interstate Commerce Commission mandated that the weights of each major cost component be updated annually. These "external" weights are calculated using data from Schedules 410 and 210 of the R-1 annual report filed with the Surface Transportation Board by the Class I railroads. The weights are typically updated with the fourth quarter projection.

In a decision (Docket No. FD 35506) served July 25, 2013, the Surface Transportation Board ordered BNSF Railway to "refile its R-1 report for 2010, 2011, and 2012...." In addition, Union Pacific Railroad revised its interest expense for years 2010 through 2012 during the same month. The BNSF revisions became available in late October 2013. The revisions caused changes to the weights used by the RCAF's All-Inclusive Index. Weights for all three years were revised in the 2014Q1 filing. The STB approved the revised weights in its December 20, 2013, decision. An additional railroad revised its 2011 and 2012 annual report during February and March 2014. The revisions did not affect the rounded version of 2011 weights, but caused small changes in the 2012 weights (shown below).

Weights for RCAF's All-Inclusive Index		
	Old 2012	Revised 2012
Labor	31.3 %	31.2 %
Fuel	22.4	22.3
Materials & Supplies	4.9	4.9
Equipment Rents	5.6	5.6
Depreciation	11.9	11.9
Interest	2.0	2.0
Other	<u>21.9</u>	<u>22.1</u>
Total	100.0	100.0

Reweightings of the index is accomplished by calculating both the current quarter (normally the fourth) and prior (normally the third) quarter indexes with the new weights. The relative change between the two quarters is then multiplied times the prior quarter (usually the third) *linked* index. Use of this method ensures that the weight change, by itself, does not cause a change in the level of the All-Inclusive Index.

Internal weights in the labor and equipment rents components are updated at the same time as the external weights. When these weights are changed, they are also linked using the procedure described above in order to eliminate the effect of the change in weighting.

All-Inclusive Index Second Quarter 2014

The components and values of the current and previous All-Inclusive Indexes are shown below. Details of the construction of each component of the index are contained in the Appendices.

	2012r Weights	Forecast		Percent Change
		Previous 2014Q1r	Current 2014Q2	
1. Labor	31.2%	386.2	388.1	0.5 %
2. Fuel	22.3%	377.9	386.2	2.2
3. M&S	4.9%	265.9	274.8	3.3
4. Equipment Rents	5.6%	208.7	212.6	1.9
5. Depreciation	11.9%	217.8	216.9	-0.4
6. Interest	2.0%	76.6	76.6	0.0
7. Other	22.1%	220.5	225.2	2.1
8. Weighted Average				
a. 1980 = 100		305.7	309.7	
b. 1980 = 100 (linked)		293.0	296.8 ¹	
c. 4Q12r = 100		98.5	99.7 ²	1.2

r Weights were revised in this 2014Q2 filing. See Introduction on page 1 for more information.

$$\begin{aligned}
 &^1 \text{ Index80} = (\text{Current Index} / \text{Previous Index}) * \text{the Previous Quarter Linked Index} \\
 &= (309.7 / 305.7) \times 293.0 \\
 &= 296.8
 \end{aligned}$$

² To calculate the 4Q12 = 100 index:

$$\begin{aligned}
 \text{Index4Q12} &= (\text{Current Linked Index} / \text{4Q12 Basing Factor}) * 100 \\
 &= 296.8 \text{ divided by } 297.6 \text{ times } 100 \\
 &= 99.7
 \end{aligned}$$

Indexes based on other periods:

- 4Q07 based index = 296.8 / 245.9 x 100 = 120.7
- 4Q02 based index = 296.8 / 192.1 x 100 = 154.5
- 4Q97 based index = 296.8 / 173.2 x 100 = 171.4
- 4Q92 based index = 296.8 / 156.9 x 100 = 189.2
- 4Q87 based index = 296.8 / 132.2 x 100 = 224.5

Forecast vs. Actual All-Inclusive Index Fourth Quarter 2013

Because of data availability, the forecast error adjustment has a two-quarter lag from each filing. As shown below, the fourth quarter actual index of 97.9 is 2.2 index points below the forecast value of 100.1. Therefore, the forecast error adjustment for second quarter 2014 is -2.2 index points.

	2012r Weights	Fourth Quarter 2013		Amt Difference
		Forecast	Actual	
1. Labor	31.2%	387.1	387.1	
2. Fuel	22.3%	399.6	374.3	
3. M&S	4.9%	261.4	261.4	
4. Equipment Rents ¹	5.6%	207.7	208.0	
5. Depreciation	11.9%	221.0	217.4	
6. Interest	2.0%	76.6	76.6	
7. Other	22.1%	220.0	219.4	
8. Weighted Average				
a. 1980 = 100		310.8 r	304.6	
b. 1980 = 100 (linked)		297.9 r	291.3 ²	
c. 4Q12 = 100 ³		100.1	97.9	-2.2

Forecast error \longrightarrow **-2.2 index points**

Note:

The standard linking procedure has been used to eliminate any changes to indexes that would be caused by updating weights. The Q3 unlinked weighted averages for the All-Inclusive Indexes (forecast and actual) and for Equipment Rents (forecast and actual) were recalculated using the new (2012r) weights. **Additionally, the Q4 forecast is the revised version found in Appendix AA of this March 17 2014Q2 filing.**

1	2012r Weights	Fourth Quarter 2013	
		Forecast	Actual
Car-Hire	48.2%	179.1	179.9
Lease Rentals	51.8%	220.0	219.4
Weighted Average		200.3	200.4
Weighted Average (linked)		207.7	208.0

² Linked actual index = (actual index / previous actual index) x previous linked actual index.
 $291.3 = 304.6 / 306.5 \times 293.1$

³ The 4Q12 based indexes are 1980 based indexes divided by the 4Q12 basing factor (297.6/100). Other basing factors are: 4Q07 = 245.9; 4Q02 = 192.1; 4Q97 = 173.2; 4Q92 = 156.9; and 4Q87 = 132.2.

Productivity

On March 4, 2014, the Surface Transportation Board (STB) served a decision in Ex Parte 290 (Sub-No. 4) which added the year 2012 to the Productivity Adjustment Factor (PAF) and removed the year 2007. This creates a geometric average annual productivity change, for the five-year period 2008 through 2012, of 1.0 percent per year. The components of this average annual value are shown on the following table in ratio format – therefore, 1.010 is the same as an increase of 1.0 percent.

Productivity changes are calculated by multiplying each of the five productivity changes together and taking the result to the one-fifth power. The productivity adjustment factors (PAF) for each quarter are calculated by increasing the previous quarter's PAF by quarterly versions of the annual rate, which are the fourth root of the geometric average annual growth rate. The difference between the PAF and the PAF-5 is the timing of the five-year productivity trend.

Comparison of Output, Input, & Productivity			
2008 - 2012			
Year	Output Index (1)	Input Index (2)	Productivity ¹ Changes (3)
2008	0.990	0.970	1.021
2009	0.847	0.861	0.984
2010	1.109	1.070	1.037
2011	1.041	1.039	1.001
2012	1.007	0.999	1.008
Average			1.010
Previous Average (2007-2011)			1.009

¹ The values shown in Column 3 are based on full float calculations and may not exactly match numbers calculated using the rounded numbers displayed in Columns 1 and 2.

Calculation of PAF and PAF-5			
For 2008-2012, use fourth root of avg. productivity change = 1.0025			
For 2007-2011, use fourth root of avg. productivity change = 1.0022			
Quarter	Year	PAF	PAF-5
Q1	2014	2.3110	2.4480
Q2	2014	2.3168	2.4534
Q3	2014	2.3226	2.4588
Q4	2014	2.3284	2.4642
Q1	2015	2.3342	2.4704

Rail Cost Adjustment Factor Second Quarter 2014

Four RCAF values are presented in this filing. Two are not modified for productivity (Preliminary RCAF and RCAF Unadjusted), and two incorporate a productivity calculation (RCAF Adjusted and RCAF-5). The All-Inclusive Index and all four RCAF values, plus the percent change for each, are shown below. Note that, beginning with 2013Q1, the All-Inclusive Index is on a 2012Q4=100 basis. **In this 2014Q2 filing, revisions were made back to 2013Q4. See Introduction on page 1 for more information. Revisions are listed in Appendix AA.**

	Previous 2014Q1r	Current 2014Q2	Percent Change
All-Inclusive Index ¹	98.5	99.7	1.2
Preliminary RCAF ²	0.985	0.997	1.2
Forecast Error Adjustment ³	<u>-0.004</u>	<u>-0.022</u>	
RCAF (Unadjusted) ⁴	0.981	0.975	-0.6
Productivity Adjustment Factor ⁵	<u>2.3110</u>	<u>2.3168</u>	
RCAF (Adjusted) ⁶	0.424	0.421	-0.7
PAF-5 ⁷	2.4480	2.4534	
RCAF-5 ⁸	0.401	0.397	-1.0

¹ See All-Inclusive Index on page 3.

² All-Inclusive Index divided by the All-Inclusive Index in the base period (100.0).

³ The current figure is from Forecast vs. Actual All-Inclusive Index in this filing (page 4). The previous quarter figure is shown in a similar section of the previous quarter's filing.

⁴ Preliminary RCAF plus the forecast error adjustment.

⁵ See Productivity on page 5.

⁶ RCAF (Unadjusted) divided by the Productivity Adjustment Factor (PAF).

⁷ See Productivity on page 5.

⁸ RCAF (Unadjusted) divided by the PAF-5.

Appendixes

Labor

Second Quarter 2014

The second quarter 2014 Labor Index is forecast to increase 0.5 percent from the previous quarter. The increase was caused by better bonus payments in 2014.

Wage Rate Index

The Wage Rate Index portion of the Labor Index increased 0.5 percent. The major changes were higher profit sharing payments in 2014 (for performance in 2013) and the complete amortization and removal of a negative back pay amount.

Wage Increases: No wage increases are scheduled for the second quarter. Wages increased slightly (0.04 percent) because one independent union exercised an option to end bonuses and update its wage rate to a value equal to the national agreement.

Lump Sums: The second quarter lump sum rate increased 10.1 cents from the previous quarter. Three major lump sums from early 2013 were fully amortized and removed from the index, but the 2014 versions of these bonuses had higher payouts – and were therefore higher amounts than the previous year.

Back Pay: The second quarter back pay rate increased 9.7 cents, caused mostly by the complete amortization and removal of a negative amount related to the second quarter 2013 change where one railroad's conductors were rebenchmarked from national-agreement to independent.

Other: In wages, "Other" contains the amortization of incentive payments that a railroad makes each year to its dispatchers, yardmasters, and engineers. The current amount is for a payment made in early 2013, and it is unchanged. The second quarter 2014 is the last quarter for amortization of the early 2013 payment. The payment made in early 2014 will begin to be amortized with the 2014Q3 submission.

Supplements Index

The Supplements Index increased 0.4 percent, mostly because of higher employer 401(k) matches, and an increase in Railroad Retirement taxes corresponding with the slight increase in taxable wages.

Health & Welfare: The Health & Welfare rate was unchanged from the first quarter.

Railroad Retirement: The Railroad Retirement rate increased 0.4 percent. The increase was caused by higher taxable earnings.

Unemployment Insurance: The Unemployment Insurance rate was unchanged for the second quarter. Despite slightly higher taxable earnings for Q2, taxable earnings in the prior quarter were already beyond the maximum taxable amount.

Labor

Second Quarter 2014

Other: The "Other" category is a reflection of all other fringe benefits, and currently contains known employer contributions to employee 401(k) accounts and employer contributions to employee stock plans that are recorded as fringe benefits. For the second quarter, the rate increased 3.5 cents because of more employer 401(k) contributions.

Labor Index Calculation

As shown in Table A-1 on the next page, the 0.5 percent increase in the Wage Rate Index and the 0.4 percent increase in the Supplements Index combined to cause a 0.5 percent increase in the Labor Index. The linked second quarter 2014 Labor Index is 388.1.

Labor Second Quarter 2014

Table A-1 Labor Index

	2014Q1	2014Q2	Change	
			Percent	Amount
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$38.724	\$38.739	0.0%	\$0.015
Adjustments:				
Lump Sum	0.214	0.315	47.2%	\$0.101
Back Pay	-0.077	0.020	-126.0%	\$0.097
Other	0.208	0.208	0.0%	\$0.000
Total Wages	<u>39.069</u>	<u>39.282</u>	0.5%	\$0.213
Health & Welfare Benefits	7.623	7.623	0.0%	\$0.000
RR Retirement & Medicare	7.736	7.767	0.4%	\$0.031
Unemployment Insurance	0.059	0.059	0.0%	\$0.000
Other	0.147	0.182	23.8%	\$0.035
Total Supplements	<u>\$15.565</u>	<u>\$15.631</u>	0.4%	\$0.066
Total Labor	\$54.634	\$54.913		
Wage Index¹	334.4	336.2	0.5%	
Supplements Index²	575.2	577.6	0.4%	
Total labor Index, 2012r Weights ³	408.6	410.6		
Labor Index (linked)⁴	386.2	388.1	0.5%	

¹ 1980 wage rate \$11.685

² 1980 supplements rate \$2.706

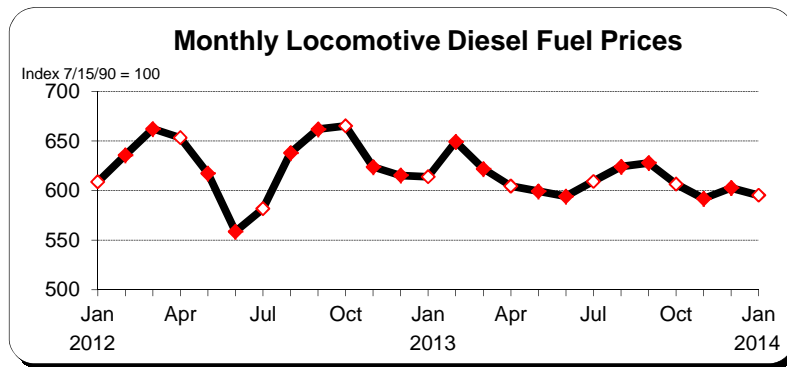
³ 2012r weights: wages, supplements 69.2% 30.8%

⁴ 2014Q2 linked Index = 2014Q1r linked x (2014Q2 / 2014Q1r)
= 386.2 x 410.6 / 408.6

Fuel Second Quarter 2014

The forecast for fuel is based on: (1) a survey of railroad fuel purchasing officers concerning current price and volume levels, (2) expectations of railroad purchasing officers based on their own forecast models and discussions with their major suppliers, and (3) a consensus of petroleum industry experts and general business publications. Fuel purchases are assumed to remain in inventory for 30 days before the fuel is consumed (and therefore expensed). Therefore, prices paid in the first month of each quarter are for fuel expensed in the second (or middle) month of the quarter, and the middle month is used to represent each quarter.

Locomotive diesel fuel prices increased in December, but decreased in January. The chart below shows the AAR's Monthly Locomotive Diesel Fuel Price Index from January 2012 through January 2014.



While the latest average prices for locomotive diesel fuel are available only through January 2014, data through most of February are available for related fuel types. Crude oil* futures prices increased about \$10 from early January to late February. Residential heating oil** prices rose from January to February as extra-cold winter temperatures caused increased demand. On-highway diesel fuel prices also increased. According to the U.S. Energy Administration, the "sustained cold weather that overtook much of the United States during January and February increased demand for space heating fuels, disrupted crude oil and natural gas production as well as refinery, rail, and pipeline operations, and challenged the ability of energy infrastructure to deliver fuel." [Another extremely cold weather system moved across the nation during the first days of March.] Not surprisingly, railroads believe prices for April 2014 (Q2) will be 2.2 percent higher than the first quarter forecast (represented by January 2014), and 5.1 percent higher than the average price actually paid in January.

Forecast Fuel Index (1980 = 100)	386.2
Change from previous quarter forecast	2.2%
Change from previous quarter actual	5.1%

* Diesel fuel used by locomotives is made from refined crude oil, and therefore usually has some price correlation.

** Heating oil and locomotive diesel fuel are part of a group of closely related products, commonly labeled as distillates, that differ mostly by their sulfur content. Because of these similarities, these fuels are produced together and have similar pricing trends.

Materials & Supplies

Second Quarter 2014

The second quarter 2014 Materials & Supplies Index increased 3.3 percent from the previous quarter. The change was caused by increases in all three categories (Metal Products, Miscellaneous Products, and Forest Products).

2014Q2 Materials & Supplies Index = 274.8

2014Q1r Materials & Supplies Index = 265.9

Difference	8.9 basis points
	or
	3.3 %

Equipment Rents Second Quarter 2014

The Equipment Rents Index consists of two components – car hire and lease rentals. The methodology used to create these two components and the final Equipment Rents Index are explained below.

Car Hire

The car hire component is indexed using data from the Car Hire Accounting Rate Master (CHARM) file. Car hire rates for the forecast quarter are estimated based on data for active freight cars using the most recent month available. For the first quarter, December 1 of the previous year is used. For the second, third and fourth quarters; March 1, June 1, and September 1 are used, respectively. Using data retrieved from the latest CHARM file, an average rate per car is developed. Next, those average rates are grouped into car type categories to create an overall summary of car hire rates. The summary rates are then compared from quarter to quarter to determine the Car Hire Index.

Lease Rentals

The lease rentals portion of the Equipment Rents Index uses the Producer Price Index for Industrial Commodities less Fuel and Related Products and Power (PPI-LF). The Commission adopted this surrogate in its decision served March 13, 1987. The AAR uses six years of historical data to derive its forecast for the PPI-LF. The forecast is used not only for lease rentals, but also for the "Other" component of the All-Inclusive Index. Appendix G discusses the forecast in more detail.

Equipment Rents Index Calculation

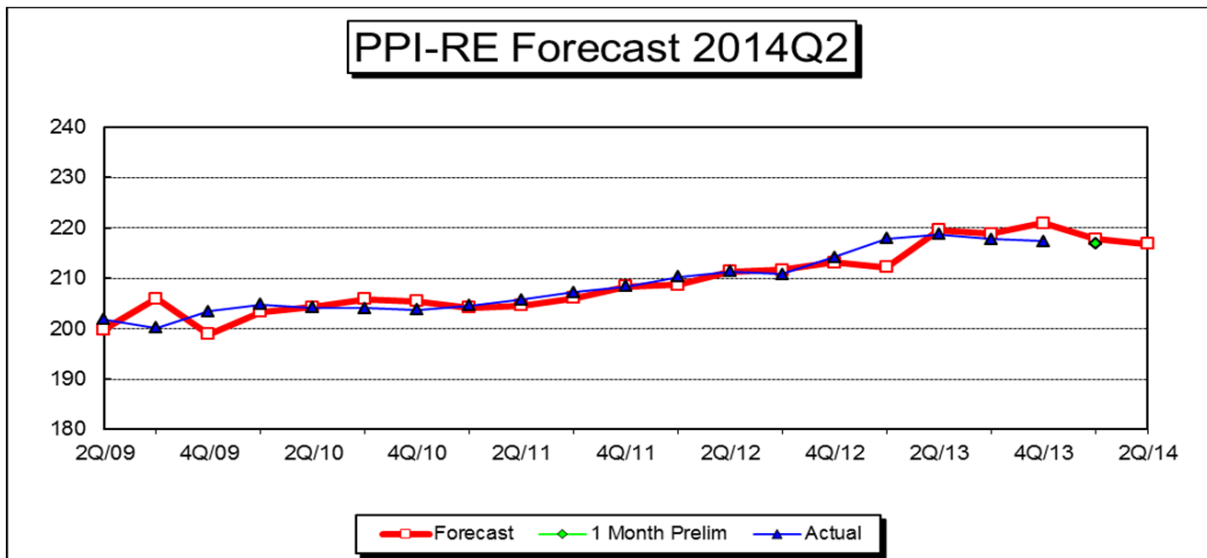
Equipment Rents weights were recalculated in the 2014Q1 filing because two railroads revised their annual reports for 2010, 2011, and 2012. See Appendix AA of the 2014Q1 filing for more detail. The table below calculates the Equipment Rent Index. The second quarter Car Hire portion of the Index increased 1.6 percent, as most freight car categories had small increases in March 1 average rates compared to the December rates used to forecast the first quarter. A 2.1 percent increase for the projected PPI-LF (see Appendix G) used as a proxy for Lease Rentals, combined with the 1.6 percent increase for Car Hire, caused the Equipment Rent Index to increase 1.9 percent.

	2012r Weight	2014Q1r	2014Q2	Percent Change
Car Hire	48.2%	180.6	183.5	1.6 %
Lease Rentals	51.8%	220.5	225.2	2.1
Weighted Average		201.3	205.1	1.9
Weighted Average (Linked)		208.7	212.6	1.9

Depreciation Second Quarter 2014

The Producer Price Index for Railroad Equipment (PPI-RE) is used to index depreciation expense. The PPI-RE is forecast using an ARIMA (Auto-Regressive Integrated Moving Average) process where a statistical package picks the model that best fits the historical data set (see next page), and that model is then used for the forecast. The historical data set contains 6 years of monthly data (a sample size of 72), where the most recent available data point is the first month of the quarter prior to the forecast quarter. For a first quarter forecast, the most recent month of data available would be for October of the prior year. For a second quarter forecast, January would normally be the most recent period available. April and July would be the most recent months available for third and fourth quarter forecasts, respectively. The output from the forecast model is shown on page 2 of this appendix on a 1982=100 basis. The figure forecast by the model reflects a PPI-RE figure for January that was a decrease from the prior month, and close to its value from one year ago. The decrease from the previous quarter forecast is amplified by a previous quarter forecast that may have been slightly high.

Forecast of Depreciation Index (1982=100)	196.1
Forecast of Depreciation Index (1980=100)	216.9
Change from previous quarter forecast	-0.4%
Change from actual first month of previous quarter	0.0%
Change from same quarter of prior year (actual)	-0.9%



Depreciation Second Quarter 2014

PPI RAILROAD EQUIPMENT

Recommended model: Box-Jenkins
 Forecast Model for PPIRE
 ARIMA(0,1,0)

Within-Sample Statistics

Sample size 72	Number of parameters 0
Mean 187.1	Standard deviation 5.709
R-square 0.9572	Adjusted R-square 0.9578
Durbin-Watson 2.389	Ljung-Box(18)=20.43 P=0.6911
Forecast error 1.173	BIC 1.173
MAPE 0.003917	RMSE 1.173
MAD 0.7375	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2013-08	194.500
2013-09	194.600
2013-10	195.800
2013-11	196.500
2013-12	197.300
2014-01	196.100

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2014-02	193.785	196.100	198.415
2014-03	192.826	196.100	199.374
2014-04	192.090	196.100	200.110
2014-05	191.470	196.100	200.730
2014-06	190.923	196.100	201.277
QTR AVG	191.494	196.100	200.706

Interest Second Quarter 2014

The Interstate Commerce Commission, in its decision served February 28, 1989, revised the All-Inclusive Index methodology to include a specific interest component, which is to track changes in the average interest rate from year to year. The interest rate is essentially the embedded cost of debt, i.e., total interest expense divided by average total long term debt. The interest rate is calculated for the most recent year and used until the next year's figures are available. Typically in the fourth quarter filing, the interest rate is updated to the new level. The source for interest expense is Schedule 210, column b, from the R-1 annual report. The lines used from current R-1 annual reports are listed below. The source for average total debt is Schedule 200 from the R-1 annual report. The sums of data from columns b and c (ending and beginning balances) are combined and divided by 2 to compute an average balance. The line numbers are listed below.

The current Interest Index is based on revised 2012 annual report data submitted by 2 railroads during the Summer and Fall of 2013. Annual report revisions received from a third railroad in February and March 2014 had no impact on this calculation.

Interest Expense (Schedule 210)

Line	
42	Total Fixed Charges
44	Contingent Interest
less	
22	Release of Premium on Funded Debt

Average Total Debt (Schedule 200)

Line	
30	Current Loans and Notes Payable
39	Equipment Obligations and Other Long Term Debt Due Within One Year
41	Funded Debt Unmatured - Non-Current
42	Equipment Obligations - Non-Current
43	Capitalized Lease Obligatons - Non-Current
44	Debt in Default - Non-Current
45	Accounts Payable: Affiliated Companies - Non-Current
46	Unamortized Debt Premium - Non-Current

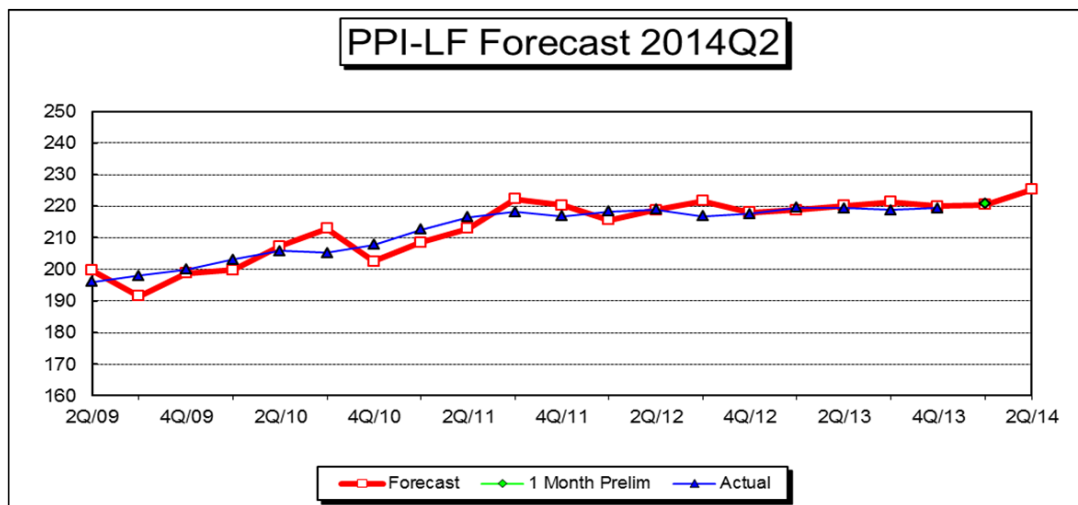
2012	Interest Rate	6.01%
1980	Interest Rate	7.85%
2014Q2	Interest Index	76.6
2014Q1r	Interest Index	76.6
	Percent Change	0.0%

Other Expenses Second Quarter 2014

The Producer Price Index for Industrial Commodities less Fuels and Related Products and Power (PPI-LF) is used to index purchased services, casualties and insurance, loss and damage, taxes (other than income and payroll), general and administrative expenses, and lease rentals. These expenses, when grouped together, are usually called "Other" expenses.

Like the PPI-RE, the PPI-LF is forecast using an ARIMA process on 6 years of monthly data (a sample size of 72) with the most recent available monthly data being the first month of the quarter prior to the forecast quarter. For a first quarter forecast, the most recent month of data available would be for October of the prior year. For a second quarter forecast, January would normally be the most recent month available. April and July would be the most recent months available for third and fourth quarter forecasts respectively. The output from the forecast model is shown on page 2 of this appendix for 1982=100. The figure forecast by the model for the second quarter reflects a monthly PPI-LF figure for January that increased at a 6.3 percent annual rate.

Forecast of Other Expense Index (1982=100)	200.9
Forecast of Other Expense Index (1980=100)	225.2
Change from previous quarter forecast	2.1%
Change from actual first month of previous quarter	2.0%
Change from same quarter of prior year (actual)	2.6%



Other Expenses Second Quarter 2014

PPI INDUSTRIAL COMMODITIES LESS FUELS AND RELATED PRODUCTS AND POWER

Recommended model: Exponential Smoothing
 Forecast Model for PPILF
 Holt exponential smoothing: Linear trend, No seasonality

Component	Smoothing Weight	Final Value
Level	1.00000	196.90
Trend	1.00000	1.0000

Within-Sample Statistics

Sample size 72	Number of parameters 2
Mean 187.6	Standard deviation 7.559
R-square 0.9882	Adjusted R-square 0.988
Durbin-Watson 1.919	Ljung-Box(18)=17.25 P=0.4941
Forecast error 0.8285	BIC 0.8669
MAPE 0.003419	RMSE 0.8169
MAD 0.6375	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2013-08	195.300
2013-09	195.100
2013-10	195.600
2013-11	195.500
2013-12	195.900
2014-01	196.900

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2014-02	196.201	197.900	199.599
2014-03	195.101	198.900	202.699
2014-04	194.803	199.900	204.997
2014-05	194.774	200.900	207.026
2014-06	194.894	201.900	208.906
QTR AVG	194.824	200.900	206.976

Railroad and Union Abbreviations

Second Quarter 2014

Railroads

BLE	Bessemer & Lake Erie Railroad (Part of CN's Grand Trunk Corp.)
BNSF	BNSF Railway Company
CC	Chicago, Central & Pacific (Part of CN's Grand Trunk Corp. Sometimes noted as CC&P.)
CN	Canadian National Railway (Commonly known as CN, owns Grand Trunk Corporation.)
CNGT	AAR's abbreviation for Grand Trunk Corporation (Almost all of CN's U.S. operations.)
CP	Canadian Pacific (Also noted as CPR. Owns the U.S. Class I railroad Soo Line.)
CPSL	AAR's abbreviation for Soo Line Corporation (CP's U.S. operations including SOO, D&H, and DME.)
CSX	CSX Transportation
D&H	Delaware & Hudson (Canadian Pacific's U.S. operations, included beginning 2011Q4.)
DME	Dakota, Minnesota & Eastern (Canadian Pacific's U.S. operations, included beginning 2011Q4.)
EJE	Elgin, Joliet & Eastern Railway (Part of CN's Grand Trunk Corp.)
GTW	Grand Trunk Western Railroad (Part of CN's Grand Trunk Corp.)
IC	Illinois Central Railroad (Part of CN's Grand Trunk Corp.)
KCS	Kansas City Southern Railway
NS	Norfolk Southern Combined Railroad Subsidiaries (a.k.a. Norfolk Southern Railway or NS Rail)
SOO	Soo Line Railroad (the largest of Canadian Pacific's U.S. operations.)
UP	Union Pacific Railroad
WC	Wisconsin Central and subsidiaries (Part of CN's Grand Trunk Corp.)

Major Unions Involved with Railroads

ATDA	American Train Dispatchers Association
BLET	Brotherhood of Locomotive Engineers and Trainmen Div. of the International Brotherhood of Teamsters
BMWED	Brotherhood of Maintenance of Way Employees Division of the International Brotherhood of Teamsters
BRS	Brotherhood of Railroad Signalmen
IAM	International Association of Machinists and Aerospace Workers
IBBM	International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers & Helpers
IBEW	International Brotherhood of Electrical Workers
NCFO	National Conference of Firemen and Oilers
SMW	Sheet Metal Workers' International Association
TCU	Transportation Communication International Union
TCU-Carmen	Brotherhood of Railway Carmen Division of the Transportation Communications International Union
UTU	United Transportation Union
UTU-Yard	United Transportation Union Yardmaster Department (also noted as UTU-YMD)

Predecessor Unions (Some AAR databases use these old abbreviations.)

BLE	Brotherhood of Locomotive Engineers (predecessor to BLET)
BMWE	Brotherhood of Maintenance of Way Employees (predecessor to BMWED)
BRC	Brotherhood of Railway Carmen (predecessor to TCU-Carmen)
IBFO	International Brotherhood of Firemen and Oilers (predecessor to NCFO)

Revised All-Inclusive Indexes and RCAFs Second Quarter 2014

The AAR received annual report revisions for 2011 and 2012 from one railroad on February 27 and March 7, 2014. This did not provide enough time for the AAR to process the revised reports and determine the impact on up to 7 RCAFs by the March 5 filing. The Surface Transportation, in a decision served March 12, 2014, directed the AAR to update its calculations based on all annual report revisions by March 17, 2014. (The filing is dated March 18 because a snowstorm caused Federal government offices in the Washington area to be closed on March 17.) The AAR has complied and recalculated all RCAFs that used 2011 or 2012 Annual Report Form R-1 data. In many cases, recalculated numbers rounded to the same number as found in the 2014Q1 filing (Appendix AC). None of the RCAFs that used 2011 annual report data for weights, benchmarks, and index components were affected by the revisions. The 2012 weights changed slightly. None of the All-Inclusive Index components for any quarter are changed.

Beginning with the 2013Q4 index, weights based on 2012 annual report data are used. Calculations for 2013Q4 and 2014Q1 had small changes, but their forecast error calculations (which use 2011 weights) were not affected. The March 5 version of 2014Q2 was also affected slightly, but this is not considered a revision since this March 18 filing replaces the March 5 version. The 2014Q2 index is shown in its normal place (page 3) in this March 18 filing. Thus, the only RCAF revisions involve 2014Q1.

	Revised	Revised	From 2014Q1 filing		Changes	
	2013Q4	2014Q1	2013Q4	2014Q1	Q4	Q1
All-Inclusive Index						
Weighted Avg. 1980=100	310.8	305.7	311.1	306.0	(0.3)	(0.3)
Linked 1980=100	297.9	293.0	297.8	292.9	0.1	0.1
4Q/12=100 basis	100.1	98.5	100.1	98.4	-	0.1
RCAF						
Preliminary RCAF	1.001	0.985	1.001	0.984	-	0.001
Forecast Error Adjustment	-0.026	-0.004	-0.026	-0.004	-	-
RCAF Unadjusted (for Productivity)	0.975	0.981	0.975	0.980	-	0.001
Productivity Adjustment Factor	2.3059	2.311	2.3059	2.3110		
RCAF Adjusted	0.423	0.424	0.423	0.424	-	-
PAF-5	2.4426	2.448	2.4426	2.448		
RCAF-5	0.399	0.401	0.399	0.400	-	0.001