

ASSOCIATION
OF AMERICAN
RAILROADS

John T. Gray
Senior Vice President - Policy & Economics

December 5, 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 first quarter 2015 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2015-1) *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 first quarter 2015 results on the fourth quarter 2012 base, and shows the percentage changes from the previous quarter.

	<u>2014Q4</u>	<u>2015Q1</u>	<u>% Change</u>
All-Inclusive Index	98.5	95.5	-3.0
Preliminary RCAF	0.985	0.955	-3.0
Forecast Error Adjustment	-0.008	-0.009	
RCAF (Unadjusted)	0.977	0.946	-3.2
Productivity Adjustment Factor	2.3284	2.3342	
RCAF (Adjusted)	0.420	0.405	-3.6
PAF-5	2.4642	2.4704	
RCAF-5	0.396	0.383	-3.3

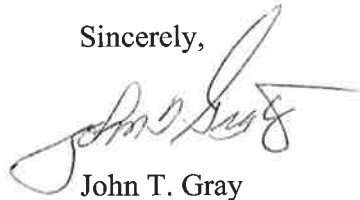
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December 5, 2014

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.

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,

A handwritten signature in black ink, appearing to read "John T. Gray", with a stylized flourish extending from the end of the signature.

John T. Gray

Attachments

**First Quarter 2015
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2015-1)

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

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

December 5, 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 first quarter 2015.

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.

The 2013 (current) and 2012 (previous) weights are shown below. Weights calculated from 2012 data were used for the fourth quarter of 2013 through the third quarter of 2014. (Revisions to annual reports caused revisions to the 2012 weights.) Beginning with the fourth quarter of 2014, weights calculated using 2013 data are used. Labor had the biggest increase in weight, as it increased from 31.2 to 31.6 percent of expenses. Weights for Fuel and Equipment Rents decreased by 0.2 percentage points, although the weight for Fuel remains high compared to other years. Weights for Depreciation increased by 0.1 percentage point, Interest decreased by 0.1 percentage point, and the remaining components experienced no change at all. During October 2014, the STB ordered one railroad to make a small revision to Schedule 410 of its 2013 annual report. However, the change had no impact on the weights calculated earlier in August.

Weights for RCAF's All-Inclusive Index		
	2012	2013
Labor	31.2 %	31.6 %
Fuel	22.3	22.1
Materials & Supplies	4.9	4.9
Equipment Rents	5.6	5.4
Depreciation	11.9	12.0
Interest	2.0	1.9
Other	<u>22.1</u>	<u>22.1</u>
Total	100.0	100.0

Reweighting 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 First Quarter 2015

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.

	2013 Weights	Forecast		Percent Change
		Previous 2014Q4	Current 2015Q1	
1. Labor	31.6%	389.7	401.6	3.1 %
2. Fuel	22.1%	368.8	309.1	-16.2
3. M&S	4.9%	276.6	274.9	-0.6
4. Equipment Rents	5.4%	213.0	213.1	0.0
5. Depreciation	12.0%	217.4	218.6	0.6
6. Interest	1.9%	70.6	70.6	0.0
7. Other	22.1%	223.2	223.1	0.0
8. Weighted Average				
a. 1980 = 100		306.5	297.1	
b. 1980 = 100 (linked)		293.2	284.2 ¹	
c. 4Q12 = 100		98.5	95.5 ²	-3.0

¹ Index80 = (Current Index / Previous Index) * the Previous Quarter Linked Index
= (297.1 / 306.5) x 293.2
= 284.2

² To calculate the 4Q12 = 100 index:

$$\text{Index}_{4Q12} = (\text{Current Linked Index} / \text{4Q12 Basing Factor}) * 100$$

$$= 284.2 \text{ divided by } 297.6 \text{ times } 100$$

$$= 95.5$$

Indexes based on other periods:

4Q07 based index = 284.2 / 245.9 x 100 = 115.6
4Q02 based index = 284.2 / 192.1 x 100 = 147.9
4Q97 based index = 284.2 / 173.2 x 100 = 164.1
4Q92 based index = 284.2 / 156.9 x 100 = 181.1
4Q87 based index = 284.2 / 132.2 x 100 = 215.0

Forecast vs. Actual All-Inclusive Index Third Quarter 2014

Because of data availability, the forecast error adjustment has a two-quarter lag from each filing. As shown below, the third quarter actual index of 98.6 is 0.9 index points below the forecast value of 99.5. Therefore, the forecast error adjustment for first quarter 2015 is -0.9 index points.

	2012 Weights	Third Quarter 2014		Amt Difference
		Forecast	Actual	
1. Labor	31.2%	395.4	395.4	
2. Fuel	22.3%	375.9	366.4	
3. M&S	4.9%	271.2	271.2	
4. Equipment Rents ¹	5.6%	212.2	212.7	
5. Depreciation	11.9%	217.1	217.4	
6. Interest	2.0%	76.6	76.6	
7. Other	22.1%	222.9	222.3	
8. Weighted Average				
a. 1980 = 100		309.0	306.8	
b. 1980 = 100 (linked)		296.1	293.4 ²	
c. 4Q12 = 100 ³		99.5	98.6	-0.9

Forecast error \longrightarrow **-0.9 index points**

1	2012 Weights	Third Quarter 2014	
		Forecast	Actual
Car-Hire	48.2%	185.1	186.1
Lease Rentals	51.8%	222.9	222.3
Weighted Average		204.7	204.9
Weighted Average (linked)		212.2	212.7

² Linked actual index = (actual index / previous actual index) x previous linked actual index.
 $293.4 = 306.8 / 307.8 \times 294.4$

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 First Quarter 2015

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.

	Previous 2014Q4	Current 2015Q1	Percent Change
All-Inclusive Index ¹	98.5	95.5	-3.0
Preliminary RCAF ²	0.985	0.955	-3.0
Forecast Error Adjustment ³	<u>-0.008</u>	<u>-0.009</u>	
RCAF (Unadjusted) ⁴	0.977	0.946	-3.2
Productivity Adjustment Factor ⁵	<u>2.3284</u>	<u>2.3342</u>	
RCAF (Adjusted) ⁶	0.420	0.405	-3.6
PAF-5 ⁷	2.4642	2.4704	
RCAF-5 ⁸	0.396	0.383	-3.3

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

First Quarter 2015

The first quarter 2015 Labor Index is forecast to increase 3.1 percent from the previous quarter. Wage increases and new fringe benefit rates had major impacts on the index.

Wage Rate Index

The Wage Rate Index portion of the Labor Index increased 2.7 percent. Most railroad employees will receive a general wage increase effective January 1.

Wage Increases: Following past index procedure, non-union employees were assigned a general wage increase (3.8 percent) similar to the increase received by most unions last July. The non-union wage increase is effective January 1. Participants in the national labor agreements will receive a 3.0 percent general wage increase effective January 1. Many independent labor agreements also contain general wage increases effective January 1. These increases are typically 3 percent. A few new independent agreements between the railroads and some of the larger unions are currently being negotiated. If ratified, those agreements could have January wage increases that have not been added to the 2015Q1 Index – and will have to be added to the Q2 Index with back pay. Because of the independent contracts under negotiation, and some independent contracts that do not have a January 1 increase, the base wage portion of the Wage Rate Index increased only 2.7 percent.

Lump Sums: Two lump sum amounts were completely amortized and removed. One of the lump sums removed was an annual performance bonus that was replaced with this year's higher amount, which caused the increase of 0.1 cents.

Back Pay: There no changes to the back pay rate.

Other: In wages, "Other" contains the amortization of incentive payments that a railroad makes each year to its dispatchers, yardmasters, and engineers. There are no changes for this quarter.

Supplements Index

The Supplements Index increased 3.5 percent. New health insurance premiums were incorporated into the rate effective January 1. New payroll tax rates and maximum taxable earnings effective in 2015 were also utilized.

Health & Welfare: The Health & Welfare rate decreased 4.0 cents (0.5 percent) from the previous quarter. Slightly lower employer contributions (lower premiums) will go into effect January 1. (See pages 4 and 5 of this appendix.) Employee health & welfare cost sharing was unchanged.

Railroad Retirement: The Railroad Retirement rate increased 4.8 percent, 37.7 cents. The increase was caused by a combination of higher taxable earnings, higher maximum taxable earnings, and a higher Tier II tax rate (for employers) – all effective January 1. Page 4 of this appendix lists tax rates and maximum taxable earnings for 2013 through 2015.

Labor

First Quarter 2015

Unemployment Insurance: The Unemployment Insurance rate jumped 14.5 cents because of higher maximum taxable earnings and a higher tax rate effective January 1. Rates and taxable earnings are shown on page 4 of this appendix. Basic tax rates range from a minimum of 0.65 percent to a maximum of 12 percent. However, if the Railroad Unemployment Insurance Account balance falls below a certain threshold, a surcharge can be imposed. For 2015, a surcharge of 1.5 percent will be used – meaning that the weighted average Class I railroad rate will be 2.31 percent compared to only 0.68 percent for 2014. There were no surcharges in 2013 and 2014. Page 4 of this appendix lists tax rates and maximum taxable earnings for 2013 through 2015.

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 first quarter, the rate increased 7.1 cents as employers typically have more contributions for awards, performance, and other bonus matches.

Labor Index Calculation

As shown in Table A-1 on the next page, the 2.7 percent increase in the Wage Rate Index and the 3.5 percent increase in the Supplements Index combined to cause a 3.1 percent increase in the Labor Index. The linked first quarter 2015 index is 401.6.

Labor First Quarter 2015

Table A-1 Labor Index

	2014Q4	2015Q1	Change	
			Percent	Amount
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$38.974	\$40.039	2.7%	\$1.065
Adjustments:				
Lump Sum	0.315	0.316	0.3%	\$0.001
Back Pay	0.094	0.094	0.0%	\$0.000
Other	0.136	0.136	0.0%	\$0.000
Total Wages	<u>\$39.519</u>	<u>40.585</u>	2.7%	\$1.066
Health & Welfare Benefits	7.652	7.612	-0.5%	-\$0.040
RR Retirement & Medicare	7.835	8.212	4.8%	\$0.377
Unemployment Insurance	0.059	0.204	245.8%	\$0.145
Other	0.106	0.177	67.0%	\$0.071
Total Supplements	<u>\$15.652</u>	<u>\$16.205</u>	3.5%	\$0.553
Total Labor (as info only)	\$55.171	\$56.790		
Wage Index¹	338.2	347.3	2.7%	
Supplements Index²	578.4	598.9	3.5%	
Total labor Index, 2012 Weights ³	410.0	422.5		
Labor Index (linked)⁴	389.7	401.6	3.1%	

¹ 1980 wage rate \$11.685

² 1980 supplements rate \$2.706

³ 2013 weights: wages, supplements 70.1% 29.9%

⁴ 2015Q1 linked Index = 2014Q4 linked x (2015Q1 / 2014Q4)
= 389.7 x 422.5 / 410.0

Labor
First Quarter 2015

Supplement Comparisons

Health and Welfare Rates

Plan	Railroad Contribution Per Employee Per Month				
	2013	2014	2015	Change	
				'13-'14	'14-'15
Group Health & Welfare	\$1,350.36	\$1,285.74	\$1,298.28	-4.8%	1.0%
Early Retirement Major Medical	139.04	127.92	109.90	-8.0%	-14.1%
Group Dental	55.90	53.00	50.83	-5.2%	-4.1%
Group Vision	8.37	8.39	8.41	0.2%	0.2%
Supplemental Sickness					
Maintenance of Way	32.87	32.87	32.87	0.0%	0.0%
Shop Crafts	48.28	48.28	53.18	0.0%	10.1%
Signalmen	30.74	30.74	30.74	0.0%	0.0%
Yardmasters	34.95	34.96	34.78	0.0%	-0.5%

Railroad Retirement and Medicare

	Earnings Base			Employer Rate		
	2013	2014	2015	2013	2014	2015
Tier I	\$113,700	\$117,000	\$118,500	6.20%	6.20%	6.20%
Tier II	84,300	87,000	88,200	12.60%	12.60%	13.10%
Medicare	no limit	no limit	no limit	1.45%	1.45%	1.45%

Unemployment Insurance

Monthly Taxable Earnings Base			Weighted Avg. Class I Rate		
2013	2014	2015	2013	2014	2015
\$1,405	\$1,440	\$1,455	0.67%	0.68%	2.31%

Labor
First Quarter 2015

NATIONAL RAILWAY LABOR CONFERENCE
EMPLOYEE BENEFITS DEPARTMENT

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November 19, 2014

Mr. Clyde Crimmel
Director Statistical Information
Policy & Communications Department
AAR-5th Floor
50 F Street N.W.
Washington, D.C. 20009

Dear Mr. Crimmel:

The revised employer Payment Rates which are effective January 1, 2015 are as follows:

Railroad Employees National Health & Welfare Plan & National Railway Carriers/United Transportation Union H&W Plan Non-Hospital Road	\$1,298.28
Railroad Employees National Early Retirement Major Medical Benefit Plan Non-Hospital Road	\$ 109.90
Aetna - National Dental Plan	\$ 50.83
Aetna - Supplemental Sickness Plans	
ShopCrafts	\$ 53.18
Signalmen (no change)	\$ 30.74
Maintenance of Way (no change)	\$ 32.87
Trustmark - Supplemental Sickness Plans Yardmasters	\$ 34.78
EyeMed - National Vision Plan	\$ 8.41

If you have any questions or need clarification, please contact me.

Very truly yours,



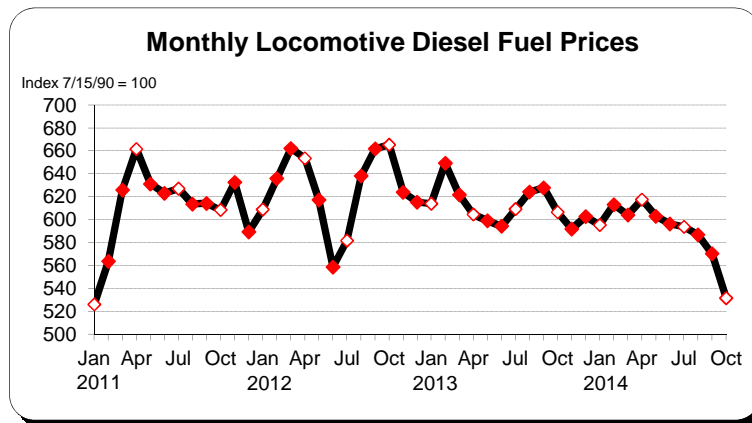
Susan E. Parks

cc: Glen Williams

Fuel First Quarter 2015

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 have decreased for 6 consecutive months, and are at their lowest level since January 2011. The chart below shows the AAR's Monthly Locomotive Diesel Fuel Price Index from January 2011 through October 2014.



While the latest average prices for locomotive diesel fuel are available only through October 2014, data through most of November are available for related fuel types. Weekly crude oil* spot prices continued falling from October through November, as did spot prices for Heating Oil.** The current supply of crude oil is close to the peak of its 5-year range, and this is believed to be in excess of current demand. The Organization of the Petroleum Exporting Countries (OPEC) recently announced that it plans to make no changes to its output target – allowing prices to decrease. Their decision may signal a desire to keep their market share and make things difficult for higher-cost non-OPEC producers – a "price war". Lower oil prices should also increase demand. As a result, railroads expect January locomotive diesel fuel prices to be lower than those for October – despite low distillate stocks.

Forecast Fuel Index (1980 = 100)	309.1
Change from previous quarter forecast	-16.2%
Change from previous quarter actual	-5.8%

* 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

First Quarter 2015

The first quarter 2015 Materials & Supplies Index decreased 0.6 percent from the previous quarter. The change was caused by decreases in prices for Metal Products and for Miscellaneous Products.

2015Q1 Materials & Supplies Index = 274.9

2014Q4 Materials & Supplies Index = 276.6

Difference -1.7 basis points
or
-0.6 %

Equipment Rents First Quarter 2015

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

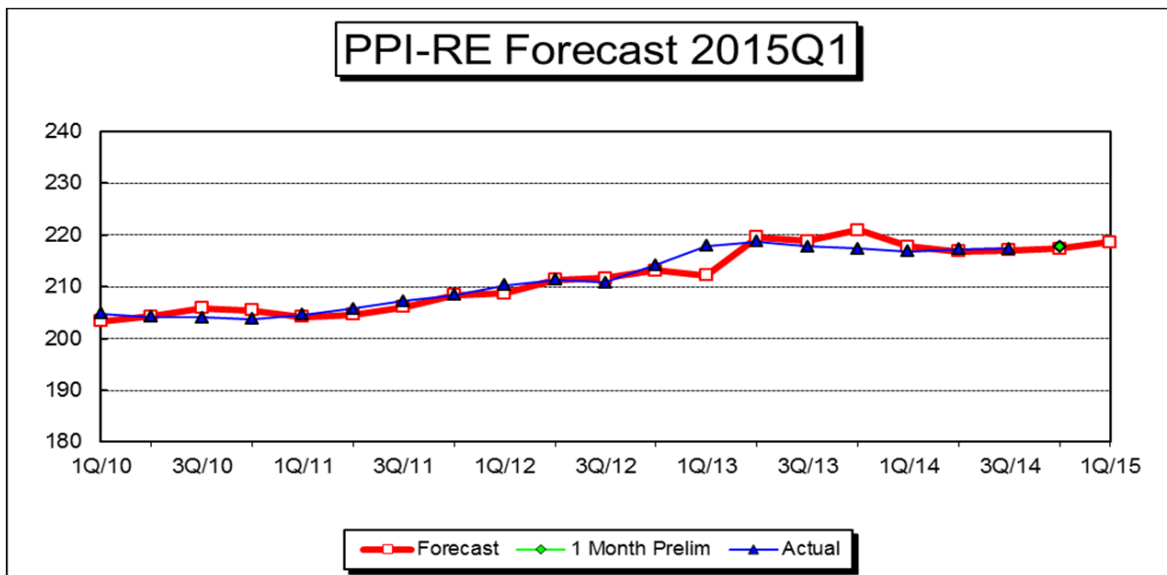
The table below calculates the Equipment Rents Index. The first quarter Car Hire portion of the Index increased 0.2 percent mostly because of higher rates for privately-owned cars tank cars. The projected PPI-LF (See Appendix G) used as a proxy for Lease Rentals decreased by only 0.1 index points. As a percentage, this decrease is 0.0448 percent – rounded to 0.0 in the table below. Using the rounded indices and combining the 0.2 percent increase for Car Hire with the 0.0448 percent decrease in Lease Rentals results in an increase in the Equipment Rent Index of slightly less than 0.05 percent – rounded to 0.0 in the table below.

	2013	2014Q4	2015Q1	Percent
	Weight			Change
Car Hire	52.8%	186.2	186.6	0.2 %
Lease Rentals	47.2%	223.2	223.1	0.0
Weighted Average		203.7	203.8	0.0
Weighted Average (Linked)		213.0	213.1	0.0

Depreciation First Quarter 2015

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 PPI-RE figures that have been up and down during recent months, with little net change.

Forecast of Depreciation Index (1982=100)	197.6
Forecast of Depreciation Index (1980=100)	218.6
Change from previous quarter forecast	0.6%
Change from actual first month of previous quarter	0.4%
Change from same quarter of prior year (actual)	0.8%



Depreciation First Quarter 2015

PPI RAILROAD EQUIPMENT

Exponential smoothing outperforms Box-Jenkins by 0.735 to 0.764 out-of-sample Mean Absolute Deviation. I tried 78 forecasts up to a maximum horizon 12.

Series is trended and nonseasonal.

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

Component	Smoothing Weight	Final Value
Level	0.67564	196.88
Trend	0.01519	0.18901

Within-Sample Statistics

Sample size 72	Number of parameters 2
Mean 189.2	Standard deviation 5.719
R-square 0.9665	Adjusted R-square 0.9661
Durbin-Watson 1.962	Ljung-Box(18)=8.724 P=0.0342
Forecast error 1.053	BIC 1.102
MAPE 0.003488	RMSE 1.039
MAD 0.6617	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2014-05	196.7
2014-06	196.8
2014-07	196.4
2014-08	196.2
2014-09	197.0
2014-10	196.8

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2014-11	194.912	197.072	199.232
2014-12	194.641	197.261	199.881
2015-01	194.440	197.450	200.460
2015-02	194.284	197.639	200.994
2015-03	194.161	197.828	201.496
QTR AVG	194.295	197.639	200.9833

Interest First Quarter 2015

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 data from the 2013 Annual Report Form R-1 submitted by each Class I railroad to the Surface Transportation Board at the end of March 2014.

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

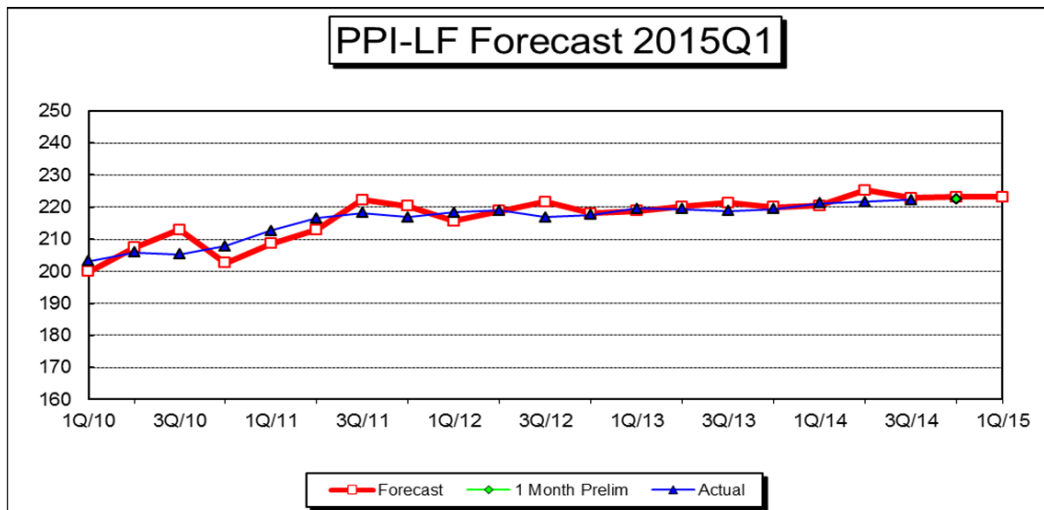
2013	Interest Rate	5.54%
1980	Interest Rate	7.85%
2015Q1	Interest Index	70.6
2014Q4	Interest Index	70.6
	Percent Change	0.0%

Other Expenses First Quarter 2015

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 forecast reflects recent PPI-LF figures that have shown little change in recent months.

Forecast of Other Expense Index (1982=100)	199.0
Forecast of Other Expense Index (1980=100)	223.1
Change from previous quarter forecast	0.0%
Change from actual first month of previous quarter	0.3%
Change from same quarter of prior year (actual)	0.9%



Other Expenses First Quarter 2015

PPI INDUSTRIAL COMMODITIES LESS FUELS AND RELATED PRODUCTS AND POWER

Box-Jenkins outperforms exponential smoothing by 1.109 to 1.249 out-of-sample Mean Absolute Deviation. I tried 78 forecasts up to a maximum horizon 12.

Series is nonstationary and nonseasonal.

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

Term	Coefficient	Std. Error	t-Statistic	Significance
a[1]	0.7357	0.0697	10.5613	1.0000
A[12]	0.3764	0.1030	3.6560	0.9995

Within-Sample Statistics

Sample size 72	Number of parameters 2
Mean 189.5	Standard deviation 7.849
R-square 0.9951	Adjusted R-square 0.995
Durbin-Watson 2.164	Ljung-Box(18)=11.42 P=0.1243
Forecast error 0.555	BIC 0.5807
MAPE 0.002235	RMSE 0.5472
MAD 0.4219	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2014-05	197.6
2014-06	197.7
2014-07	198.0
2014-08	198.3
2014-09	198.5
2014-10	198.5

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2014-11	197.374	198.455	199.535
2014-12	196.380	198.544	200.708
2015-01	195.713	198.988	202.264
2015-02	194.738	199.106	203.474
2015-03	193.551	198.969	204.387
QTR AVG	194.667	199.021	203.375

Railroad and Union Abbreviations

First Quarter 2015

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.)
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.)

Note: A portion of the DM&E was sold during 2014.

Note: A proposal was made in November 2014 to sell a portion of the D&H pending regulatory approval.

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)