

ASSOCIATION  
OF AMERICAN  
RAILROADS

**John T. Gray**  
Senior Vice President - Policy & Economics

March 5, 2013

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 2013 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2013-2) *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 first quarter 2013 results on the **fourth quarter 2012 base**, and shows the percentage changes from the previous quarter.

	<u>2013Q1</u>	<u>2013Q2</u>	<u>% Change</u>
All-Inclusive Index	99.9	100.3	0.4
Preliminary RCAF	0.999	1.003	0.4
Forecast Error Adjustment	-0.002	0.003	
RCAF (Unadjusted)	0.997	1.006	0.9
Productivity Adjustment Factor	2.2907	2.2957	
RCAF (Adjusted)	0.435	0.438	0.7
PAF-5	2.4279	2.4328	
RCAF-5	0.411	0.414	0.7

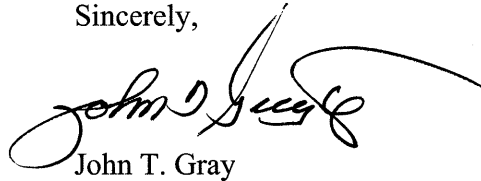
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In its October 3, 1996 decision in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation*, the STB noted its intent to publish, in addition to the RCAF (Unadjusted) and RCAF (Adjusted), an RCAF-5 (i.e., a calculation of the productivity 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.

We have notified Paul Aguiar, in the STB office handling this proceeding, of our plan to e-file the submission and the non-proprietary work papers in accordance with the ICC's order in Ex Parte No. 290 (Sub-No. 2), *Railroad Cost Recovery Procedures*, served February 8, 1990. 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 workpapers 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 large, sweeping flourish extending to the right.

John T. Gray

Attachments

**Second Quarter 2013  
All-Inclusive Index**

**Ex Parte No. 290 (Sub-No. 5) (2013-2)**

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

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

**March 5, 2013**

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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 2013. The STB's decision served February 11 regarding the change in railroad productivity has been utilized where appropriate.

## 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 2011 (current) and 2010 (previous) weights are shown below. The 2010 weights were used for the fourth quarter of 2011 through the third quarter of 2012. Beginning with the fourth quarter of 2012, 2011 weights are used. In 2011, expenses increased for every category with the exception of interest expenses. However, fuel expenses increased by the highest percentage and amount, caused by a huge increase in fuel costs and a much smaller increase in traffic. Not surprisingly, Fuel's weight increased from 18.0 percent to 22.5 percent. This is the second-highest weight ever for Fuel. The only other category to have its weight increase was Materials & Supplies, which increased 0.1 percentage points. Labor's weight decreased from 33.3 to 31.3 percent, despite an 8 percent increase in expenses. Weights for the remaining categories decreased by 0.4 to 1.2 percentage points.

RCAF Weights		
	Previous 2010	Current 2011
Labor	33.3 %	31.3 %
Fuel	18.0	22.5
Materials & Supplies	5.0	5.1
Equipment Rents	6.2	5.6
Depreciation	12.8	11.6
Interest	2.9	2.5
Other	21.8	21.4

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 Second Quarter 2013

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.

	2011 Weights	Forecast		Percent Change
		Previous 2013Q1	Current 2013Q2	
1. Labor	31.3%	389.7	384.9	-1.2 %
2. Fuel	22.5%	396.5	404.3	2.0
3. M&S	5.1%	263.4	261.0	-0.9
4. Equipment Rents	5.6%	206.7	206.9	0.1
5. Depreciation	11.6%	212.2	219.6	3.5
6. Interest	2.5%	92.9	92.9	0.0
7. Other	21.4%	218.8	220.2	0.6
8. Weighted Average				
a. 1980 = 100		310.0	311.3	
b. 1980 = 100 (linked)		297.3	298.5 <sup>1</sup>	
c. 4Q12 = 100		99.9	100.3 <sup>2</sup>	0.4

**Note:** As required every five years, this index was rebased in the 2013Q1 (previous quarter) filing. The rebase affects line 8c on this page. See page 1A and Attachment A in the 2013Q1 filing for more detail.

<sup>1</sup> To calculate the 1980 = 100 Linked Index:

$$\begin{aligned} \text{Index}_{80} &= (\text{Current Index} / \text{Previous Index}) * \text{the Previous Quarter Linked Index} \\ &= (311.3 / 310.0) \times 297.3 \\ &= 298.5 \end{aligned}$$

<sup>2</sup> To calculate the 4Q12 = 100 index:

$$\begin{aligned} \text{Index}_{4Q12} &= (\text{Current Linked Index} / 4Q12 Basing Factor) * 100 \\ &= 298.5 \text{ divided by } 297.5 \text{ times } 100 \\ &= 100.3 \end{aligned}$$

Indexes based on other periods:

- 4Q07 based index = 298.5 / 245.9 x 100 = 121.4
- 4Q02 based index = 298.5 / 192.1 x 100 = 155.4
- 4Q97 based index = 298.5 / 173.2 x 100 = 172.3
- 4Q92 based index = 298.5 / 156.9 x 100 = 190.2
- 4Q87 based index = 298.5 / 132.2 x 100 = 225.8

## Forecast vs. Actual All-Inclusive Index Fourth Quarter 2012

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 100.8 is 0.3 index points above the forecast value of 100.5. Therefore, the forecast error adjustment for second quarter 2013 is 0.3 index points.

	2011 Weights	Fourth Quarter 2012		Amt Difference
		Forecast	Actual	
1. Labor	31.3%	390.5	390.5	
2. Fuel	22.5%	403.3	410.6	
3. M&S	5.1%	266.1	266.1	
4. Equipment Rents <sup>1</sup>	5.6%	205.7	206.0	
5. Depreciation	11.6%	213.2	214.2	
6. Interest	2.5%	92.9	92.9	
7. Other	21.4%	218.0	217.6	
8. Weighted Average				
a. 1980 = 100		311.8	313.5	
b. 1980 = 100 (linked) <sup>2</sup>		299.0	300.0 <sup>3</sup>	
c. 4Q12 = 100 <sup>4</sup>		100.5	100.8	0.3

**Forecast error**       $\longrightarrow$       **0.3 index points**

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**Note:** As required every five years, this index was rebased in the 2013Q1 filing. Thus, line 8c uses a 4Q12 base instead of the 4Q07 base used in the original filing. See page 1A and Attachment A in the 2013Q1 filing for more detail.

1	2011 Weights	Fourth Quarter 2012	
		Forecast	Actual
Car-Hire	48.6%	177.3	178.1
Lease Rentals	51.4%	218.0	217.6
Weighted Average		198.2	198.4
Weighted Average (linked)		205.7	206.0

<sup>2</sup> 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 (2011) weights.

<sup>3</sup> Linked actual index = (actual index / previous actual index) x previous linked actual index.  

$$300.0 = 313.5 / 301.8 \times 288.8$$

<sup>4</sup> The 4Q12 based indexes are 1980 based indexes divided by the 4Q12 basing factor (297.5/100). Other basing factors are: 4Q07 = 245.9; 4Q02 = 192.1; 4Q97 = 173.2; 4Q92 = 156.9; and 4Q87 = 132.2.



# Productivity

On February 11, 2013, the Surface Transportation Board (STB) served a decision in Ex Parte 290 (Sub-No. 4) which added the year 2011 to the Productivity Adjustment Factor (PAF) and removed the year 2006. This creates a geometric average annual productivity change, for the five-year period 2007 through 2011, of 0.9 percent per year. The components of this average annual value are shown on the following table in ratio format – therefore, 1.009 is the same as an increase of 0.9 percent. Productivity changes are calculated by multiplying each of the five productivity changes together and taking the result to the one-fifth power. The quarter productivity adjustment factors (PAF) 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.

<b>Comparison of Output, Input, &amp; Productivity</b>			
<b>2007 - 2011</b>			
Year	Output Index (1)	Input Index (2)	Productivity <sup>1</sup> Changes (3)
2007	1.000	0.996	1.004
2008	0.990	0.970	1.021
2009	0.847	0.861	0.984
2010	1.109	1.070	1.036
2011	1.041	1.041	1.000
<b>Average</b>			<b>1.009</b>
Previous Average (2006-2010)			1.008

<sup>1</sup> 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.

<b>Calculation of PAF and PAF-5</b>			
For 2007-2011, use fourth root of avg. productivity change = 1.0022			
For 2006-2010, use fourth root of avg. productivity change = 1.0020			
Quarter	Year	PAF	PAF-5
Q1	2013	2.2907	2.4279
Q2	2013	2.2957	2.4328
Q3	2013	2.3008	2.4377
Q4	2013	2.3059	2.4426
Q1	2014	2.3110	2.4480

## Rail Cost Adjustment Factor Second Quarter 2013

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 2013Q1	Current 2013Q2	Percent Change
All-Inclusive Index <sup>1</sup>	99.9	100.3	0.4
Preliminary RCAF <sup>2</sup>	0.999	1.003	0.4
Forecast Error Adjustment <sup>3</sup>	<u>-0.002</u>	<u>0.003</u>	
RCAF (Unadjusted) <sup>4</sup>	0.997	1.006	0.9
Productivity Adjustment Factor <sup>5</sup>	<u>2.2907</u>	<u>2.2957</u>	
RCAF (Adjusted) <sup>6</sup>	0.435	0.438	0.7
PAF-5 <sup>7</sup>	2.4279	2.4328	
RCAF-5 <sup>8</sup>	0.411	0.414	0.7

<sup>1</sup> See All-Inclusive Index on page 3.

<sup>2</sup> All-Inclusive Index divided by the All-Inclusive Index in the base period (100.0).

<sup>3</sup> 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.

<sup>4</sup> Preliminary RCAF plus the forecast error adjustment.

<sup>5</sup> See Productivity on page 5.

<sup>6</sup> RCAF (Unadjusted) divided by the Productivity Adjustment Factor (PAF).

<sup>7</sup> See Productivity on page 5.

<sup>8</sup> RCAF (Unadjusted) divided by the PAF-5.

# Appendixes

## Labor

### Second Quarter 2013

The second quarter 2013 Labor Index is forecast to decrease 1.2 percent from the previous quarter. The decrease was caused mostly by lower costs for back pay and lump sums.

#### Wage Rate Index

The Wage Rate Index portion of the Labor Index decreased 1.6 percent from the previous quarter. Much of the decrease was caused by the complete amortization and removal of back pay amounts relating to last year's new national agreements with 10 unions. Lump sum amounts also relating to new national agreements from last year were also fully amortized and removed from the index. [See Appendix H for a list of major railroad unions.]

**New Labor Agreements:** Five independent labor agreements were added to the index. Like many of the recent new contracts, these agreements typically had retroactive wage increases that caused back pay and/or lump sum payments.

**Wage Increases:** There are no wage increases scheduled for the second quarter.

**Lump Sums:** The second quarter lump sum rate dropped by more than one third from the previous quarter. Lump sum payments related to 11 new national labor agreements are now fully amortized, so they were removed from the rate. In addition, two annual performance bonus payments from 2012 were fully amortized and removed from the rate. The corresponding 2013 performance bonuses were lesser amounts than the 2012 payments, and therefore the net results were small decreases to the rate.

**Back Pay:** The second quarter back pay rate is less than half of the previous quarter amount. The major cause of the decrease was the complete amortization and removal of back pay amounts related to last year's new national agreements with 10 unions. Several new back pay amounts were added, but these amounts were for independent labor agreements – and were small compared to the national contracts. In addition, one of the newly-added back pay amounts was negative because the positive elements had already been captured.

**Other:** In wages, "Other" contains the amortization of incentive payments that a large railroad makes each year to its dispatchers, yardmasters, and engineers. This rate is unchanged.

#### Supplements Index

The Supplements Index decreased 0.7 percent. Almost all of the decrease was caused by lower Railroad Retirement costs and 401(k) matches.

**Health & Welfare:** The Health & Welfare rate decreased by \$0.001. New labor agreements increased the employee health & welfare cost sharing amount, causing the cost for employers to decrease slightly. The second quarter is the last quarter in which the index will reflect a credit to health & welfare payments caused by overpayments in the first half of 2012. This credit, which is being amortized over four quarters, is unchanged from the previous quarter. For the next (third) quarter, the credit will be fully amortized and removed from the rate – causing an increase of about 20 cents.

## Labor

### Second Quarter 2013

**Railroad Retirement:** The Railroad Retirement rate decreased 9.5 cents. Taxable income was lower for the second quarter, causing the decrease in Railroad Retirement tax contributions.

**Unemployment Insurance:** The Unemployment Insurance rate was unchanged. The maximum taxable earnings is too low for the lower taxable income to affect Unemployment Insurance contributions.

**Other:** The "Other" category is a reflection of all other fringe benefits, and currently contain 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 decreased by 2.4 cents. Much of the decrease was caused by perfect attendance awards captured in the previous quarter and not included in the current quarter.

### Labor Index Calculation

As shown in Table A-1 on the next page, the 1.6 percent decrease in the Wage Rate Index and the 0.7 percent decrease in the Supplements Index combined to cause a 1.2 percent decrease in the Labor Index. The linked second quarter 2013 index is 384.9. This is the third consecutive decrease in the Labor Index, and it is at its lowest level since the first quarter of 2012.

## Labor Second Quarter 2013

Table A-1 Labor Index

	2013Q1	2013Q2	Change	
			Percent	Amount
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$37.611	\$37.609	0.0%	-\$0.002
Adjustments:				
Lump Sum	0.446	0.278	-37.7%	-0.168
Back Pay	0.780	0.324	-58.5%	-0.456
Other	0.121	0.121	0.0%	0.000
<b>Total Wages</b>	<u>38.958</u>	<u>38.332</u>	-1.6%	-0.626
Health & Welfare Benefits	7.765	7.764	0.0%	-0.001
RR Retirement & Medicare	7.988	7.893	-1.2%	-0.095
Unemployment Insurance	0.059	0.059	0.0%	0.000
Other	0.146	0.122	-16.4%	-0.024
<b>Total Supplements</b>	<u>\$15.958</u>	<u>\$15.838</u>	-0.8%	-0.120
Total Labor	\$54.916	\$54.170		
<b>Wage Index<sup>1</sup></b>	333.4	328.0	-1.6%	
<b>Supplements Index<sup>2</sup></b>	589.7	585.3	-0.7%	
Total labor Index, 2011 Weights <sup>3</sup>	414.1	409.0		
<b>Labor Index (linked)<sup>4</sup></b>	<b>389.7</b>	<b>384.9</b>	-1.2%	

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<sup>1</sup> 1980 wage rate \$11.685

<sup>2</sup> 1980 supplements rate \$2.706

<sup>3</sup> 2011 weights: wages, supplements 68.5% 31.5%

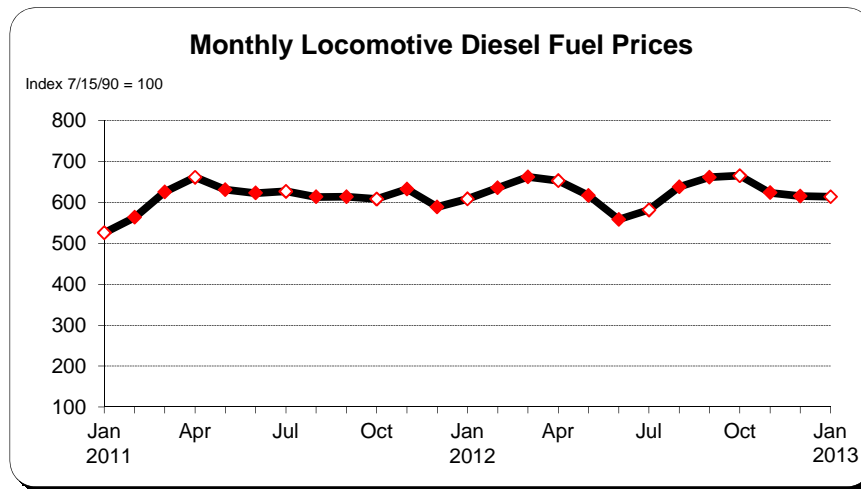
<sup>4</sup> 2013Q2 linked Index = 2013Q1 linked x (2013Q2 / 2013Q1)  
= 389.7 x 409.0 / 414.1

## Fuel Second Quarter 2013

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.

While the latest average prices for locomotive diesel fuel are available only through January, the Energy Information Administration (EIA) has weekly data through most of February for related fuel types. Both on-highway diesel fuel prices and residential heating oil prices increased from January to February.\*

Locomotive diesel fuel prices have been relatively stable over the last several months. The chart below shows the AAR's Monthly Locomotive Diesel Fuel Price Index from January 2011 through January 2013. In both 2011 and 2012, a seasonal increase in fuel prices occurred between January and April. Reviewing data back to 2000, there are only three years where the seasonal increase did not happen. In expectation of a similar seasonal increase, railroads believe prices for April 2013 (Q2) will be 2.0 percent above the first quarter forecast (represented by January 2013), and 6.7 percent above the average price actually paid for January.



Forecast Fuel Index (1980 = 100)	404.3
Change from previous quarter forecast	2.0%
Change from previous quarter actual	6.7%

\* 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 2013

The second quarter 2013 Materials & Supplies Index decreased 0.9 percent from the previous quarter. The change was caused by decreases in prices in the Metal Products and Forest Products categories. This is the third consecutive decrease for this index, and the current value is the lowest Materials & Supplies Index since the third quarter of 2011.

2013Q2 Materials & Supplies Index = 261.0

2013Q1 Materials & Supplies Index = 263.4

Difference -2.4 basis points  
or  
-0.9 %



## Equipment Rents Second Quarter 2013

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

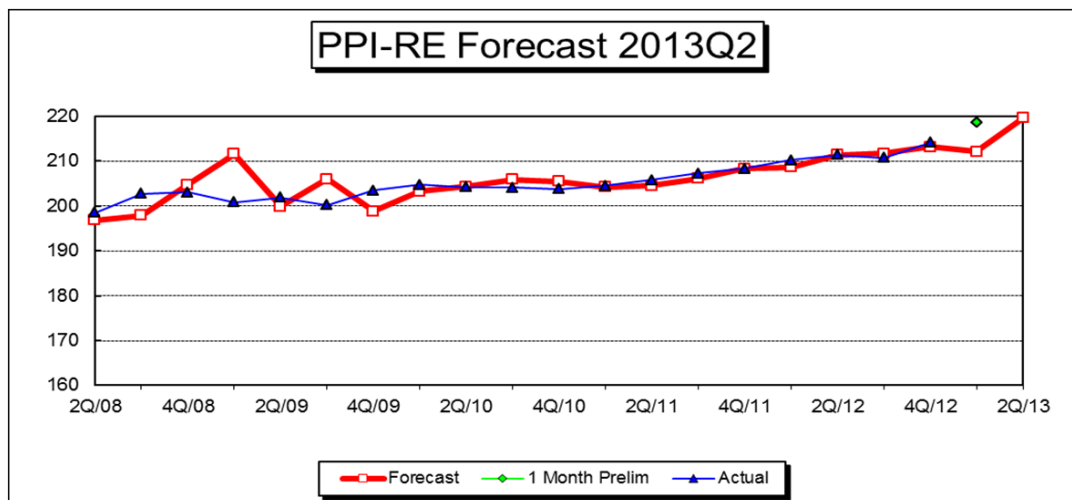
The table below calculates the Equipment Rent Index. The second quarter Car Hire portion of the Index decreased 0.6 percent because of lower rates for tank cars. A 0.6 percent increase for the projected PPI-LF (See Appendix G) used as a proxy for Lease Rentals, combined with the 0.6 percent decrease for Car Hire, caused the Equipment Rent Index to increase 0.1 percent.

	2011 Weight	2013Q1	2013Q2	Percent Change
Car Hire	48.6%	178.4	177.4	-0.6 %
Lease Rentals	51.4%	218.8	220.2	0.6
Weighted Average		199.2	199.4	0.1
Weighted Average (Linked)		206.7	206.9	0.1

## Depreciation Second Quarter 2013

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 monthly PPI-RE figures that jumped in November and January. The percentage change for the second quarter forecast may be exaggerated by a forecast for the first quarter that was probably too low.

Forecast of Depreciation Index (1982=100)	198.5
Forecast of Depreciation Index (1980=100)	219.6
Change from previous quarter forecast	3.5%
Change from actual first month of previous quarter	0.4%
Change from same quarter of prior year (actual)	3.9%



## Depreciation Second Quarter 2013

### PPI RAILROAD EQUIPMENT

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

Component	Smoothing Weight	Final Value
Level	0.80833	197.23
Trend	0.01825	0.31540

### Within-Sample Statistics

Sample size 72	Number of parameters 2
Mean 183.9	Standard deviation 5.25
R-square 0.9574	Adjusted R-square 0.9568
Durbin-Watson 1.97	Ljung-Box(18)=15.99 P=0.4064
Forecast error 1.091	BIC 1.141
MAPE 0.003719	RMSE 1.076
MAD 0.6856	

### Actual Values for the Most Recent 6 Periods:

Date	Actual
2012-08	190.400
2012-09	190.900
2012-10	190.800
2012-11	194.900
2012-12	195.100
2013-01	197.700

### Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2013-02	195.309	197.546	199.783
2013-03	194.964	197.862	200.759
2013-04	194.744	198.177	201.610
2013-05	194.597	198.492	202.388
2013-06	194.499	198.808	203.117
<b>QTR AVG</b>	<b>194.613</b>	<b>198.492</b>	<b>202.372</b>

## Interest Second Quarter 2013

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. Beginning with fourth quarter 2012, the Interest Index is based on data for 2011.

The interest index is the latest year's interest rate divided by 7.85 percent, which was the interest rate in the 1980 base period.

### 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

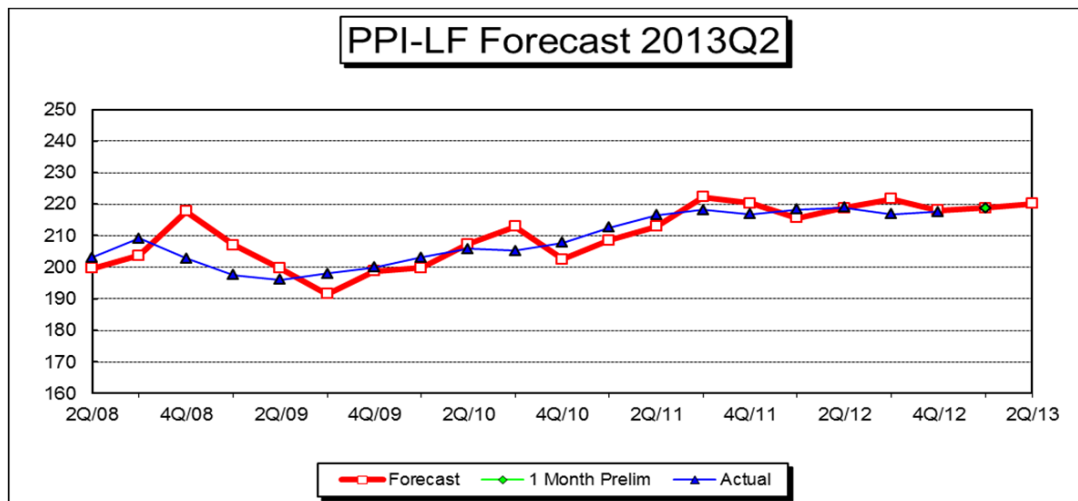
2011	Interest Rate	7.29%
1980	Interest Rate	7.85%
<b>2013Q2</b>	<b>Interest Index</b>	<b>92.9</b>
2013Q1	Interest Index	92.9
	Percent Change	0.0%

## Other Expenses Second Quarter 2013

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 monthly PPI-LF figures that have shown small increases in recent months.

Forecast of Other Expense Index (1982=100)	196.4
Forecast of Other Expense Index (1980=100)	220.2
Change from previous quarter forecast	0.6%
Change from actual first month of previous quarter	0.7%
Change from same quarter of prior year (actual)	0.6%



## Other Expenses Second Quarter 2013

### 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	0.99996	195.10
Trend	0.01685	0.32401

#### Within-Sample Statistics

Sample size 72	Number of parameters 2
Mean 183.5	Standard deviation 8.595
R-square 0.984	Adjusted R-square 0.9837
Durbin-Watson 0.5605	**Ljung-Box(18)=86.21 P=1
Forecast error 1.096	BIC 1.147
MAPE 0.004281	RMSE 1.081
MAD 0.7845	

#### Actual Values for the Most Recent 6 Periods:

Date	Actual
2012-08	193.300
2012-09	193.700
2012-10	193.900
2012-11	194.000
2012-12	194.400
2013-01	195.100

#### Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2013-02	193.175	195.424	197.673
2013-03	192.541	195.748	198.955
2013-04	192.134	196.072	200.010
2013-05	191.842	196.396	200.950
2013-06	191.625	196.720	201.816
<b>QTR AVG</b>	<b>191.867</b>	<b>196.396</b>	<b>200.925</b>

## Railroad and Union Abbreviations

### Second Quarter 2013

#### *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.)
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.)
DMIR	Duluth, Missabe & Iron Range Company (Part of CN's Grand Trunk Corp.)
DWP	Duluth, Winnipeg & Pacific Railway (Part of CN's Grand Trunk Corp.)
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)