

ASSOCIATION
OF AMERICAN
RAILROADS

John T. Gray
Senior Vice President - Policy & Economics

September 5, 2018

246324

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

ENTERED
Office of Proceedings
September 5, 2018
Part of
Public Record

Dear Ms. Brown:

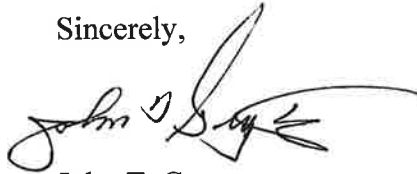
This submission is the AAR forecast of the fourth quarter 2018 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2018-4) *Quarterly Rail Cost Adjustment Factor*. The versions of RCAF-related indices covered in this filing are: the All-Inclusive Index (initiated 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 fourth quarter 2018 results and compares to the previous quarter. Both quarters are shown on a 4Q\2017=100 base.

	<u>2018Q3</u>	<u>2018Q4</u>	<u>% Change</u>
All-Inclusive Index	107.2	108.1	0.8
Preliminary RCAF	1.072	1.081	0.8
Forecast Error Adjustment	-0.011	-0.002	
RCAF (Unadjusted)	1.061	1.079	1.7
Productivity Adjustment Factor	2.3641	2.3617	
RCAF (Adjusted)	0.449	0.457	1.8
PAF-5	2.5298	2.5260	
RCAF-5	0.419	0.427	1.9

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 Pedro Ramirez, 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 Mr. Ramirez'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

**Fourth Quarter 2018
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2018-4)

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

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

September 5, 2018

Table of Contents

Subject	Page
Introduction	1
Index Weights	2
All-Inclusive Index - Fourth Quarter 2018	3
Forecast vs. Actual All Inclusive Index - Second Quarter 2018	4
Productivity	5
Rail Cost Adjustment Factor - Fourth Quarter 2018	6
Appendices	
A Labor	
B Fuel	
C Materials & Supplies	
D Equipment Rents	
E Depreciation	
F Interest	
G Other Expenses	
H Railroad and Union Abbreviations	

Introduction

On January 2, 1985, the Interstate Commerce Commission (ICC) adopted the All-Inclusive Index 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 the RCAF-5, which was instituted by a Surface Transportation Board decision served October 3, 1996 in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation*. The AAR and its members do not believe the additional productivity-adjusted index is required or permitted by the applicable statute, and do not endorse its publication.

This quarter's projection of railroad costs is for the fourth quarter 2018. The All-Inclusive Index utilizes new weights (see page 2), which are based on 2017 Annual Report Form R-1 data. New annual report and wage statistics data have also been utilized to rebenchmark labor (see Appendix A), and the annual report data have also been used to update the Interest Index (see Appendix F).

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 expense 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 2017 (current) and 2016 (previous) weights are shown below. Weights calculated from 2016 data were used for the fourth quarter of 2017 through the third quarter of 2018. Beginning with the fourth quarter of 2018, weights calculated using 2017 data are used.

The weight for Fuel increased 2.3 percentage points, and Depreciation's was up 0.2 percentage points. The remaining component weights all decreased by 0.1 to 1.0 percentage points. Although expenses were higher in every category except Equipment Rents, Fuel and Depreciation had the highest percentage increases in expenses. Traffic and fuel prices were up in 2017, causing fuel expenses to be 27 percent higher. Depreciation expenses increased 6.2 percent, possibly caused by higher capital expenditures in recent years and spending on positive train control. Labor expenses were up 3.4 percent, but Labor's weight decreased.

Weights for RCAF's All-Inclusive Index		
	2017	2016
Labor	35.0 %	35.6 %
Fuel	13.0	10.7
Materials & Supplies	4.9	5.0
Equipment Rents	5.2	5.9
Depreciation	15.8	15.6
Interest	2.1	2.2
Other	24.0	25.0
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 Fourth Quarter 2018

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.

		Forecast		
	2017 Weights	Previous 2018Q3	Current 2018Q4	Percent Change
1. Labor	35.0%	434.3	439.2	1.1 %
2. Fuel	13.0%	291.0	283.9	-2.4
3. M&S	4.9%	263.7	269.8	2.3
4. Equipment Rents	5.2%	230.5	236.4	2.6
5. Depreciation	15.8%	223.5	223.8	0.1
6. Interest	2.1%	60.5	62.4	3.1
7. Other	24.0%	231.5	235.5	1.7
8. Weighted Average				
a. 1980 = 100		306.9	309.3	
b. 1980 = 100 (linked)		283.6	285.8 ¹	
c. 4Q17 = 100		107.2	108.1 ²	0.8

Note:

New weights are utilized. The linked index is always unchanged in this linking procedure. However, the 306.9 weighted average for 2018Q3 has been recalculated with 2017 weights to eliminate any changes in the fourth quarter index that would be caused by changing weights. The original Q3 weighted average with 2016 weights is 306.6.

¹ Index80 = (Current Index / Previous Index) * the Previous Quarter Linked Index
 = (309.3 / 306.9) x 283.6
 = 285.8

² To calculate the 4Q17 = 100 index:

Index4Q17 = (Current Linked Index / 4Q17 Basing Factor) * 100
 = 285.8 divided by 264.5 times 100
 = 108.1

Indexes based on other periods:

4Q12 based index = 285.8 / 297.6 x 100 = 96.0
4Q07 based index = 285.8 / 245.9 x 100 = 116.2
4Q02 based index = 285.8 / 192.1 x 100 = 148.8
4Q97 based index = 285.8 / 173.2 x 100 = 165.0
4Q92 based index = 285.8 / 156.9 x 100 = 182.2

Forecast vs. Actual All-Inclusive Index Second Quarter 2018

Because of data availability, the forecast error adjustment has a two-quarter lag from each filing. As shown below, the second quarter actual index of 103.7 is 0.2 index points below the forecast value of 103.9. Therefore, the forecast error adjustment for fourth quarter 2018 is -0.2 index points.

	2016 Weights	Second Quarter 2018		Amt Difference
		Forecast	Actual	
1. Labor	35.6%	422.5	422.5	
2. Fuel	10.7%	248.9	261.4	
3. M&S	5.0%	258.0	258.0	
4. Equipment Rents ¹	5.9%	228.9	230.4	
5. Depreciation	15.6%	224.6	223.5	
6. Interest	2.2%	60.5	60.5	
7. Other	25.0%	229.5	231.1	
8. Weighted Average				
a. 1980 = 100		297.2	298.8	
b. 1980 = 100 (linked)		274.9	274.2 ²	
c. 4Q17 = 100 ³		103.9	103.7	-0.2

Forecast error —————→ **-0.2 index points**

¹	2016 Weights	Second Quarter 2018	
		Forecast	Actual
Car-Hire	58.3%	209.2	210.0
Lease Rentals	41.7%	229.5	231.1
Weighted Average		217.7	218.8
Weighted Average (linked)		228.9	230.4

² Linked actual index = (actual index / previous actual index) x previous linked actual index.

$$274.2 = 298.8 / 296.0 \times 271.6$$

³ The 4Q17 based indexes are 1980 based indexes divided by the 4Q17 basing factor (264.5/100).
 Other basing factors are: 4Q12 = 297.6; 4Q07 = 245.9; 4Q02 = 192.1; 4Q97 = 173.2; and 4Q92 = 156.9.

Productivity

On February 8, 2018, the Surface Transportation Board (STB) served a decision in Ex Parte 290 (Sub-No. 4) which proposed to adopt -0.4 percent as the geometric average productivity change for the five most recent years available. Their five year rolling geometric average calculation added the year 2016 and removed the year 2011. The components of this average annual value are shown on the following table in ratio format – therefore, 0.996 is the same as a decrease of 0.4 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			
2012 - 2016			
Year	Output Index (1)	Input Index (2)	Productivity Changes (3)
2012	1.007	0.999	1.008
2013	1.022	1.018	1.003
2014	1.055	1.036	1.018
2015	0.913	0.972	0.939
2016	0.955	0.941	1.015
Average			0.996
Previous Average (2011-2015)			0.994

Calculation of PAF and PAF-5			
For 2012-2016, use fourth root of avg. productivity change = 0.9990			
For 2011-2015, use fourth root of avg. productivity change = 0.9985			
Quarter	Year	PAF	PAF-5
Q1	2018	2.3689	2.5374
Q2	2018	2.3665	2.5336
Q3	2018	2.3641	2.5298
Q4	2018	2.3617	2.5260
Q1	2019	2.3593	2.5235

Rail Cost Adjustment Factor

Fourth Quarter 2018

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 the 2018Q1 index, the All-Inclusive Index was rebased to a 2017Q4=100 basis as required in the applicable statute.

	Previous 2018Q3	Current 2018Q4	Percent Change
All-Inclusive Index ¹	107.2	108.1	0.8
Preliminary RCAF ²	1.072	1.081	0.8
Forecast Error Adjustment ³	<u>-0.011</u>	<u>-0.002</u>	
RCAF (Unadjusted) ⁴	1.061	1.079	1.7
Productivity Adjustment Factor ⁵	<u>2.3641</u>	<u>2.3617</u>	
RCAF (Adjusted) ⁶	0.449	0.457	1.8
PAF-5 ⁷	2.5298	2.5260	
RCAF-5 ⁸	0.419	0.427	1.9

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

Fourth Quarter 2018

The fourth quarter 2018 Labor Index increased 1.1 percent from the previous quarter. Although 11 new independent labor agreements were added to the index, most of the increase was caused by rebenchmarking.¹

Rebenchmarking and Reweighting: Rebenchmarking, as well as updating the internal weights (i.e., the proportion of labor costs represented by wages and supplements, respectively), is reflected each year in the fourth quarter filing. The Labor rate is basically a group of benchmarks from annual data that are updated each quarter using additional information such as labor agreements, payroll tax rates, health & welfare rates, and other data. By rebenchmarking to newer annual data, the number of quarterly updates (the "distance") from the benchmark year to the current quarter becomes smaller – increasing the probability that the updated values match reality. Therefore, the impact of rebenchmarking is captured in the Labor Index, and by itself can cause a change in the index.

The new benchmark year is 2017, and data for that year replaces data for 2016. In this rebenchmarking, some railroad unions that were previously independent have now joined the national agreements. One of the major data sources underlying the fourth quarter rebenchmarking is the Annual Report Form R-1 submitted to the Surface Transportation Board (STB) by each Class I railroad. The other major data source is the 112-Class Wage Statistics report received by the Association of American Railroads (AAR) from each Class I railroad. The totals in each of the 112-Class Wage Statistics reports matches the corresponding total in the less-detailed Wage Form A&B submitted to the STB. The extra detail allows the AAR to divide the wage statistics by labor union, which enables wage rate updates to be more accurate. Data from the two major sources are used for labor benchmarks, and the annual report data are also used to calculate index weights.

The source for the wage and supplements internal weights, like the external weights, is the Annual Report Form R-1 Summary. Unlike rebenchmarking, reweighting by itself is prevented from causing a change in the index. A linking procedure, where the previous quarter unlinked index is recalculated using the new weights, eliminates changes that would be caused solely by changing weights.

Wage Rate Index

The Wage Rate Index portion of the Labor Index is up 1.2 percent. Almost all of the change was caused by rebenchmarking to 2017 wage statistics. Non-union bonuses in 2017 were better than 2016 (but not as good as 2015), and this was a significant contributor to the higher wage rate benchmark. Other possible contributors to the higher benchmark are changes in employee mix and age distribution.

New National Agreements: All of the new national labor agreements, with one exception, were incorporated in the Labor Index in the previous (2018Q3) filing. The one exception is the IAM, and that contract has not been ratified.²

¹ Rebenchmarking does not always cause increases. One year ago, rebenchmarking caused the Labor Index to decrease.

² See Appendix H for union abbreviations.

Labor

Fourth Quarter 2018

Wage Increases: No wage increases are currently scheduled for the fourth quarter. In the case of 11 new independent labor agreements added to the index, retroactive wage increases caused the wage rate to be updated.

Lump Sums: The fourth quarter lump sum rate increased by one cent. Although one amount was fully amortized and removed, it was replaced by a bonus of similar size for the new quarter.³ The entire increase was caused by rebenchmarking to wage statistics for 2017.

Back Pay: The back pay rate increased 5.1 cents. Over half of this increase was caused by rebenchmarking. An additional increase was caused by adding 11 new independent labor agreements with retroactive wage increases to the index. Some of the additional back pay was offset by a negative back pay amount for the national IBEW contract, as an arbitration board awarded the railroads a portion of the back pay owed to IBEW employees because their delay in ratifying a new labor agreement denied the carriers some health care benefit savings. As always, back pay amounts will be removed from the index after they have been amortized over four quarters.³

Other: In wages, "Other" contains the amortization of incentive compensation payments (similar to lump sums) that one railroad makes each year to its dispatchers, yardmasters, and locomotive engineers. The payment total is for performance in 2017 that was paid in early 2018. The rate increased half of a cent (\$0.005), and rebenchmarking caused the entire change.

Supplements Index

The Supplements Index increased 1.0 percent. Rebenchmarking and higher taxable earnings caused most of the increase. Some of the increase was offset by lower railroad contributions to employee stock and 401(k) plans.

Health & Welfare: The 2018Q4 Health & Welfare rate increased 12.8 cents (1.6 percent) entirely because of rebenchmarking to newer wage statistics and annual report data.

Railroad Retirement: The Railroad Retirement rate increased 20.2 cents (or 2.3 percent). The change was caused mostly by rebenchmarking, including higher taxable earnings caused by rebenchmarking. New independent labor agreements with retroactive wage increases had a small impact.

Unemployment Insurance: The Unemployment Insurance tax rate decreased by one half of one cent (\$0.005). Rebenchmarking caused the decrease.

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. The fourth quarter rate decreased 14.2 cents as this quarter does not contain bonus matches or perfect attendance stock awards.

³ Index procedure, decided by the Interstate Commerce Commission in 1988, is to amortize lump sums and/or back pay over four quarters using the rates for 13-week (a.k.a. 3-month) U.S. Treasury bills.

Labor

Fourth Quarter 2018

Labor Index Calculation

As shown in Table A-1 on the next page, the 1.2 percent increase in the Wage Rate Index and the 1.0 percent increase in the Supplements Index combined to cause the Labor Index to rise 1.1 percent from the previous quarter. The linked fourth quarter 2018 index of 439.2 is determined by multiplying the third quarter linked index of 434.3 times the change between the fourth quarter Labor Index (464.3) and the original third quarter Labor Index recalculated using the original third quarter Wage Rate and Supplements indexes weighted with the new 2017 weights (459.1). This method eliminates changes caused by the new weights, but captures changes caused by rebenchmarking. The purpose of the center "Updated to Reflect..." column in Table A-1 is only to enable the reader to discern the impact of rebenchmarking.

The linked fourth quarter 2018 Labor Index of 439.2 is 5.8 percent higher than one year ago. The current Labor Index has three additional wage increases for most unions plus considerable back pay compared to the Labor Index from a year ago. This can be attributed to the new national labor agreements that had retroactive wage increases for 2016 and 2017 in addition to their 2018 wage increases.

Labor
Fourth Quarter 2018
Table A-1 Labor Index

	2018Q3		2018Q4	
	Used in Previous Index Filing	Updated to Reflect New Benchmarks	Based on 2017 Data	Pct Chg From Prev. Filing
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$41.993	\$42.457	\$42.473	1.1%
Adjustments:				
Lump Sum	0.390	0.401	0.400	2.6%
Back Pay	1.232	1.268	1.283	4.1%
Other	0.177	0.182	0.182	2.8%
Total Wages	<u>43.792</u>	<u>\$44.308</u>	<u>44.338</u>	1.2%
Health & Welfare Benefits	8.101	8.229	8.229	1.6%
RR Retirement & Medicare	8.867	9.064	9.069	2.3%
Unemployment Insurance	0.365	0.360	0.360	-1.4%
Other	0.288	0.297	0.146	-49.3%
Total Supplements	<u>\$17.621</u>	<u>\$17.950</u>	<u>\$17.804</u>	1.0%
Total Labor (a check sum only)	\$61.413	\$62.258	\$62.142	
Wage Rate Index¹	374.8	379.2	379.4	1.2%
Supplements Index²	651.2	663.3	657.9	1.0%
Total labor Index, 2016 Weights ³	455.5			
Total labor Index, 2017 Weights ⁴	459.1	465.9	464.3	
Labor Index (linked)⁵	434.3		439.2	1.1%

¹ 1980 wage rate \$11.685

² 1980 supplements rate \$2.706

³ 2016 weights: wages, supplements 70.8% 29.2%

⁴ 2017 weights: wages, supplements 69.5% 30.5%

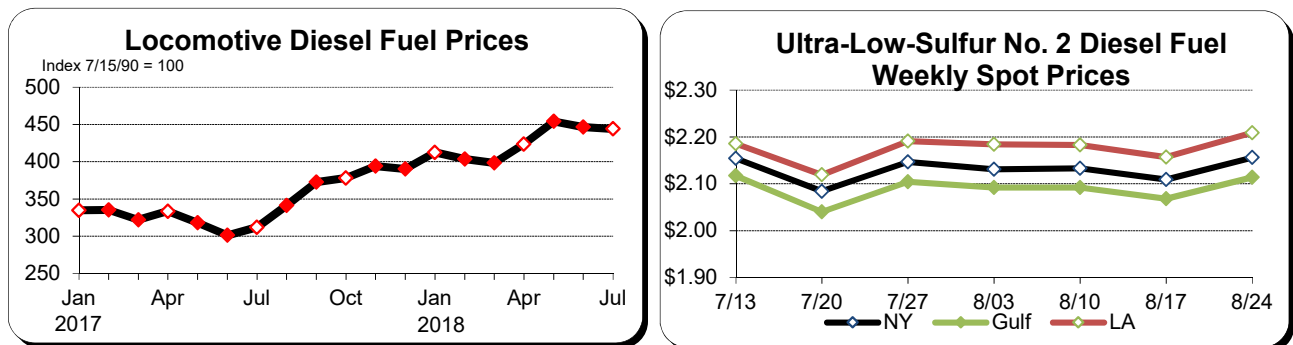
⁵ 2018Q4 linked Index = $2018Q3_{\text{linked}} \times (2018Q4_{\text{WT2017}} / 2018Q3_{\text{WT2017}})$
= 434.3 x 464.3 / 459.1

Fuel

Fourth Quarter 2018

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 expensed is used to represent each quarter.

The average locomotive diesel fuel price has been trending upward since June 2017, although the two most recent months had slight decreases. While average prices for locomotive diesel fuel are available only through July 2018, data through four weeks of August are available for related fuel types. According to the Energy Information Administration, the daily spot price as of August 27 for Ultra-Low-Sulfur Diesel Fuel* is 3.6 to 4.4 percent higher than the average for July. The chart below (on left) shows the AAR's Monthly Locomotive Diesel Fuel Price Index from January 2017 through July 2018. The second chart (on right) shows recent spot prices for Ultra-Low-Sulfur No. 2 Diesel Fuel as reported by the Energy Information Administration.



In its *This Week in Petroleum* report released August 22, the U.S. Energy Information Administration said that despite "record refinery runs and lower exports, distillate inventories in the United States have declined because consumption has outpaced the rate at which inventories have been replanished." Demand is said to be at the highest level since 2007. With demand outpacing supply, railroads expect price increases by October (Q4) compared to prices that actually occurred for July (Q3). Because the Q3 forecast was too high, the Q4 forecast is a 2.4 percent decrease.

Forecast Fuel Index (1980 = 100)	283.9
Change from previous quarter forecast	-2.4%
Change from previous quarter actual	3.6%

* Heating oil, Ultra-Low-Sulfur No. 2 Diesel Fuel, 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

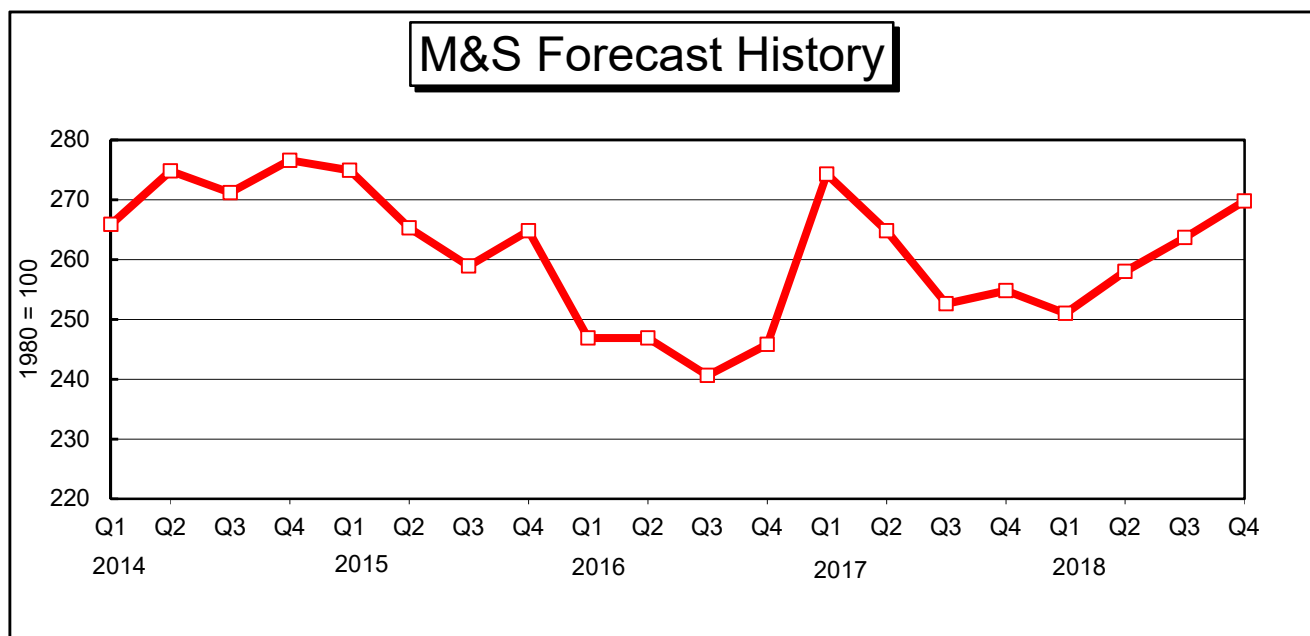
Fourth Quarter 2018

The fourth quarter 2018 Materials & Supplies Index is up 2.3 percent from the previous quarter. Prices were up in all three major categories. Despite the overall increase, the Material & Supplies Index remains lower than its values for most of 2014.

2018Q4 Materials & Supplies Index = 269.8

2018Q3 Materials & Supplies Index = 263.7

Difference	6.1 basis points
	or
	2.3 %



Equipment Rents

Fourth Quarter 2018

The Equipment Rents Index consists of two components – car hire and lease rentals. The methodologies 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 data available. For the first quarter, December 1 of the previous year is typically used. For the second, third and fourth quarters; March 1, June 1, and September 1 are usually used, respectively. Using data retrieved from the latest CHARM file, an average rate per car is developed. Next, those average rates are grouped into four car type categories to create an overall summary of car hire rates. The summary rates are then compared from quarter to quarter, and weighted, 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 shows the results of the Equipment Rents Index calculation. The fourth quarter Car Hire portion of the Index rose 3.1 percent because of higher rates for autoracks and privately-owned cars. A 1.7 percent increase for the projected PPI-LF (See Appendix G) used as a proxy for Lease Rentals, combined with the 3.1 percent increase for Car Hire, caused the Equipment Rents Index to rise 2.6 percent.

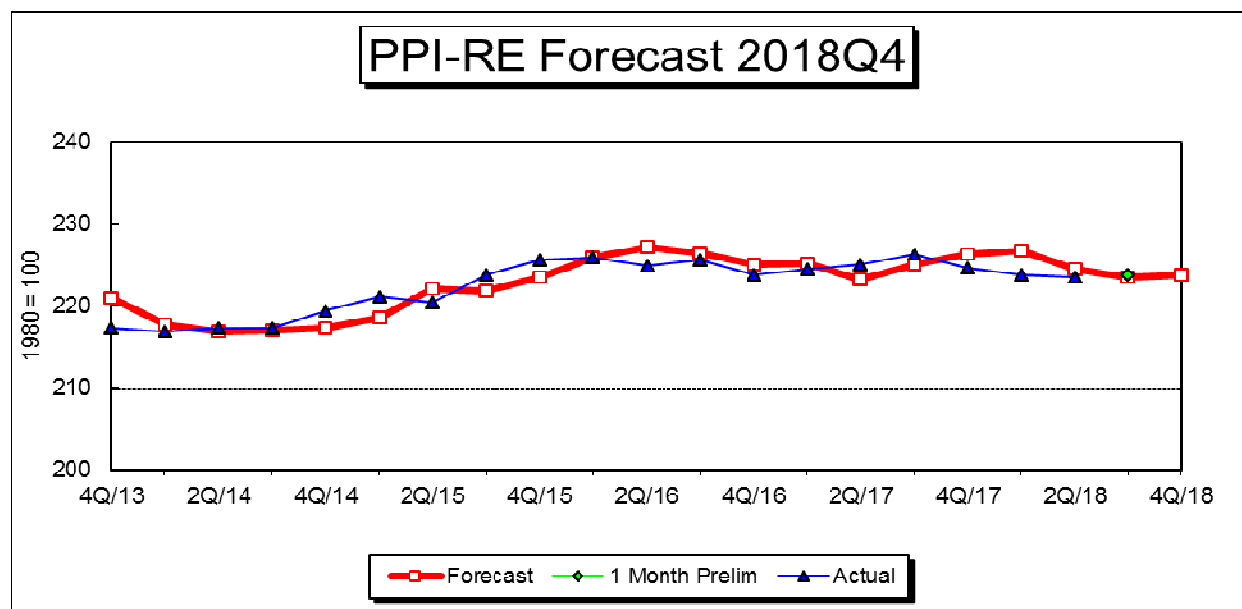
	2017			Percent
	Weight	2018Q3	2018Q4	Change
Car Hire	61.5%	210.4	216.9	3.1 %
Lease Rentals	38.5%	231.5	235.5	1.7
Weighted Average		218.5	224.1	2.6
Weighted Average (Linked)		230.5	236.4	2.6

Depreciation

Fourth Quarter 2018

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 is a 0.1 percent decrease from the previous quarter's forecast, and reflects recent monthly values that did not change much in 2018 until July.

Forecast of Depreciation Index (1982=100)	202.3
Forecast of Depreciation Index (1980=100)	223.8
Change from previous quarter forecast	0.1%
Change from actual first month of previous quarter	0.0% = -0.04%
Change from same quarter of prior year (actual)	-0.4%



Depreciation

Fourth Quarter 2018

PPI RAILROAD EQUIPMENT

Using rule-based logic, the program narrowed down the choice to exponential smoothing or Box-Jenkins. The program performed an out-of-sample test to select between these two approaches. The cumulative MAD for Exponential smoothing was 1.03, and for Box-Jenkins was 0.98. The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method. Based on the lower Mean Absolute Deviation, Box-Jenkins was selected.

Model Details

Box-Jenkins

ARIMA(1, 1, 0)

Term	Coefficient	Std. Error	t-Statistic	Significance
a[1]	-0.2452	0.1149	-2.134	0.9637

Within-Sample Statistics

Sample size	72	No. parameters	1
Mean	200.02	Std. deviation	3.71
R-square	0.93	Adj. R-square	0.93
Durbin-Watson	1.94	Ljung-Box(18)	13.40 P=0.24
Forecast error	1.00	BIC	1.02
MAPE	0.34	SMAPE	0.34
RMSE	0.99	MAD	0.68
MAD/Mean Ratio	0.00		

Actual Values for the Most Recent 6 Periods:

Date	Actual
2018-Feb	202.1
2018-Mar	202.0
2018-Apr	202.0
2018-May	202.0
2018-Jun	202.1
2018-Jul	202.4

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2018-Aug	200.373	202.326	204.279
2018-Sep	199.898	202.344	204.791
2018-Oct	199.421	202.340	205.259
2018-Nov	199.030	202.341	205.652
2018-Dec	198.677	202.341	206.005
QTR AVG	199.043	202.341	205.639

Interest

Fourth Quarter 2018

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 finalized. The source data are from a summary of the annual reports (Form R-1) submitted by each of the Class I railroads. Although the data set is received at the end of March, it is not used until the September filing. This enables data to be entered into a database and reviewed – and any revisions made, if necessary, before the data are used in the Index. The current Interest Index is based on 2017 data, and was updated in this Q4 filing submitted on September 5, 2018. The Interest Index based on 2017 increased slightly from 2016's all-time low. Interest rates for 10- and 30-year U.S. Treasury Bonds, and Corporate AAA bonds, also increased from 2016 to 2017. Changes in the mix of maturities for the debt portfolio can also cause changes in the railroad average.

The R-1 source for interest expense is Schedule 210, column b. The lines currently used are listed below. The source for average total debt is Schedule 200. 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 listed below account for the line number changes effective beginning with the 2016 annual report.

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	
29	Current Liabilities, Loans and Notes Payable
38	Equipment Obligations and Other Long Term Debt Due Within One Year
40	Non-Current Liabilities: Funded Debt Unmatured
41	Non-Current Liabilities: Equipment Obligations
42	Non-Current Liabilities: Capitalized Lease Obligations
43	Non-Current Liabilities: Debt in Default
44	Non-Current Liabilities: Accounts Payable: Affiliated Companies
45	Non-Current Liabilities: Unamortized Debt Premium

2017	Interest Rate	4.90%
1980	Interest Rate	7.85%
2018Q4	Interest Index	62.4
2018Q3	Interest Index	60.5
	Percent Change	3.1%

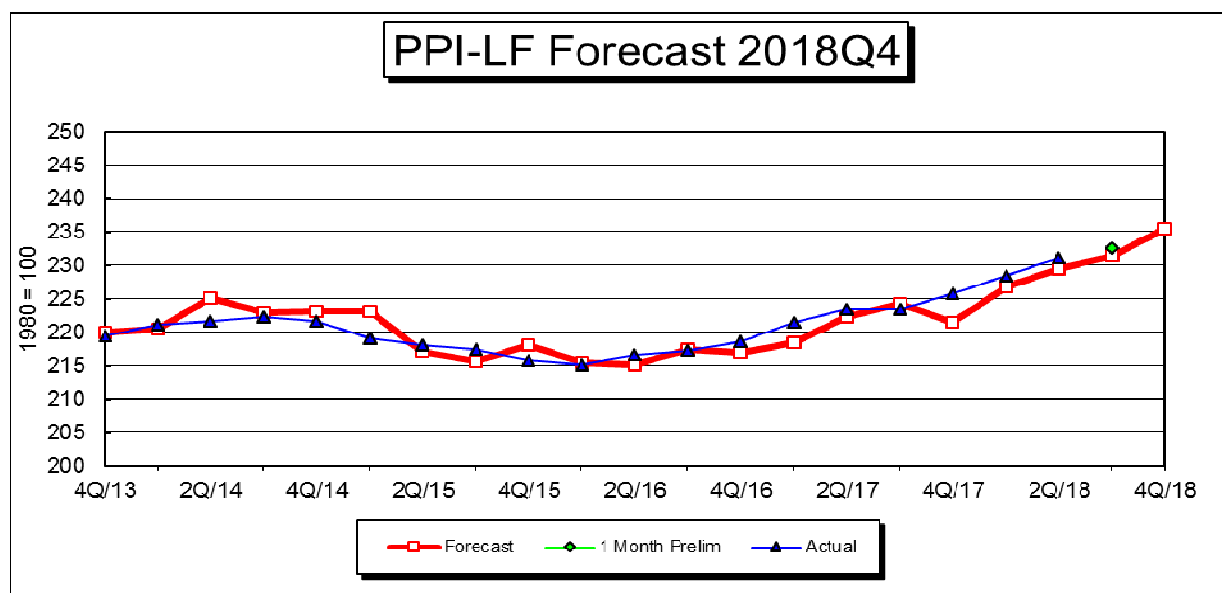
Other Expenses

Fourth Quarter 2018

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. Monthly PPI-LF figures have not decreased since July 2017.

Forecast of Other Expense Index (1982=100)	210.1
Forecast of Other Expense Index (1980=100)	235.5
Change from previous quarter forecast	1.7%
Change from actual first month of previous quarter	1.2%
Change from same quarter of prior year (actual)	4.3%



Other Expenses

Fourth Quarter 2018

PPI INDUSTRIAL COMMODITIES LESS FUELS AND RELATED PRODUCTS AND POWER

Using rule-based logic, the program narrowed down the choice to exponential smoothing or Box-Jenkins. An out-of-sample test was used to select between these two approaches. A rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method. The cumulative MAD for Exponential smoothing was 1.85 and for Box-Jenkins was 2.15. Based on the lower Mean Absolute Deviation, Exponential Smoothing was selected.

Forecast Model for PPILF

Multiplicative Winters: Linear trend, Multiplicative seasonality
LM(0.931, 0.787, 0.999)

Confidence limits proportional to indexes

Component	Smoothing Wgt		Final Value
Level	0.9306		207.6
Trend	0.787		0.5991
Seasonal	0.9994		
Seasonal Indexes			
Jan - Mar	1.001	0.9999	0.9995
Apr - Jun	0.9996	0.9995	0.9998
Jul - Sep	0.9996	1	0.9997
Oct - Dec	1.001	1.001	0.9999

Within-Sample Statistics

Sample size	72	No. parameters	3
Mean	196.83	Std. deviation	3.68
R-square	0.99	Adj. R-square	0.99
Durbin-Watson	1.71	Ljung-Box(18)	27.4 P=0.93
Forecast error	0.4	BIC	0.43
MAPE	0.16	SMAPE	0.16
RMSE	0.39	MAD	0.32
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Date	Actual
2018-Feb	203.8
2018-Mar	204.8
2018-Apr	205.2
2018-May	206.1
2018-Jun	207.0
2018-Jul	207.5

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2018-Oct	207.425	209.571	211.718
2018-Nov	207.569	210.131	212.693
2018-Dec	207.629	210.547	213.465
QTR AVG	207.541	210.083	212.625

Railroad and Union Abbreviations

Fourth Quarter 2018

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 (Part of Canadian Pacific's U.S. operations, included beginning 2011Q4.)
DME	Dakota, Minnesota & Eastern (Part of 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 part 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
SMART-TD	International Association of Sheet Metal, Air, Rail, and Transportation Workers - Transportation Division*
SMART-MD	International Association of Sheet Metal, Air, Rail, and Transportation Workers - Mechanical Division**
TCU	Transportation Communication International Union
TCU-Carmen	Brotherhood of Railway Carmen Division of the Transportation Communications International Union

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)
SMW	Sheet Metal Workers' International Association (see SMART-MD)
UTU	United Transportation Union (merged into SMART)
UTU-YMD	United Transportation Union Yardmaster Department (see SMART-TD)

* Represents employees formerly represented by the UTU (conductors and brakemen) and also has a separate yardmasters department.

** Represents employees formerly represented by the SMW (steel workers)

AAR Workpapers Sent to STB for 2018 Q4 RCAF

September 5, 2018

1. Index Calculation Spreadsheet (index_calc.xlsx, 2 pages)
2. Summary of ST and PFTNW Hourly Rates (Summary.xlsx)
3. National Contracts spreadsheet, 2 sections (2 and 5 pages)
4. U.S. 2017 Benchmark spreadsheet
5. National Increase Applicability spreadsheet for 2017 Benchmark (Public Version)
6. Wall Street Journal - 13 week Treasury Bill Rate from recent auction (a.k.a. 3-Mo. T-Bill)
7. 2018/Q4 RCAF Lump Sum Amortization summary, public version (1 page)
8. 2018/Q4 RCAF Back Pay Amortization summary, public version (1 page)
9. Back Pay National IBEW work papers (negative amount) (4 pages)
10. Health & Welfare worksheet (1 page), 2 payment rate pages from NRLC
11. RCAF Taxable Wages adjustment calculation (TaxableRate.xlsx)
12. Railroad Retirement spreadsheet (5 pages)
13. Unemployment Insurance Tax worksheet (1 page)
14. 2-page SAS run for 2018 Q4 Unemployment Insurance Tax & 2-page run for restated 2018 Q3
15. 5 pages from This Week in Petroleum (EIA) concerning distillates
16. Summary of Materials & Supplies - "U.S. Summary by Composition Category" (1 page)
17. RCAF Car Hire Forecast Spreadsheet for Equipment Rents (2 pages) plus source data page
18. 5 pages of PPI-RE for Depreciation including graph page, input/output, and BLS source data
19. Interest Index calculation (1 page) using AAR's R-1 summary (4 pages)
20. 5 pages of PPI-LF for Other (and Lease Rentals) incl. graph page, input/output, BLS source data
21. Forecast Error calc. and workpapers (10 pages: calc, index actual, fuel, 3 car hire, 2 deprec, 2 other)

Benchmarking Data

1. 2017 Wage Statistics Summary 7/25/2018
2. RCAF Weights based on 2017 data (2 pages)
3. Railroad Retirement & Medicare 2017 Payroll Tax Calculation (2 pages)
4. Railroad Retirement & Medicare 2016 Earnings Distribution (2 pages, latest available from RRB)
5. 2016 and 2017 wage benchmarks for Railroad Retirement and Unemployment Insurance
6. Restated hourly rates for 2018Q1, Q2, and Q3 for wage rate benchmark.

All Inclusive Index and RCAF using 2017 Benchmarks and Weights

	17 Wts.	3Q/18	17 Wts. 3Q/18	% Chg	4Q/18	% Chg	1Q/19	% Chg	2Q/19	% Chg	3Q/19	% Chg
Labor	0.350	434.30	434.3	0.0%	439.2	1.1%	0.0	#####	#DIV/0!	--	#DIV/0!	--
Fuel	0.130	291.00	291.0	0.0%	283.9	-2.4%		--		--		--
M&S	0.049	263.70	263.7	0.0%	269.8	2.3%		--		--		--
Equip. Rents	0.052	230.50	230.5	0.0%	236.4	2.6%	0.0	#####	#DIV/0!	--	#DIV/0!	--
Depreciation	0.158	223.50	223.5	0.0%	223.8	0.1%		--		--		--
Interest	0.021	60.50	60.5	0.0%	62.4	3.1%	62.4	0.0%	62.4	0.0%	62.4	0.0%
Other	0.240	231.50	231.5	0.0%	235.5	1.7%		--		--		--
Weighted Avg.	1.000	306.60	306.9	0.1%	309.3	0.8%	1.3	-99.6%	#DIV/0!	--	#DIV/0!	--
Linked		283.60			285.8	0.8%	1.2	-99.6%	#DIV/0!	--	#DIV/0!	--
	Basing Factor											
10/1/80 basis	102.7	276.1			278.3	0.8%	1.2	-99.6%	#DIV/0!	--	#DIV/0!	--
10/1/82	120.9	234.6			236.4	0.8%	1.0	-99.6%	#DIV/0!	--	#DIV/0!	--
4Q/87	132.2	214.5			216.2	0.8%	0.9	-99.6%	#DIV/0!	--	#DIV/0!	--
4Q/92	156.9	180.8			182.2	0.8%	0.8	-99.6%	#DIV/0!	--	#DIV/0!	--
4Q/97	173.2	163.7			165.0	0.8%	0.7	-99.6%	#DIV/0!	--	#DIV/0!	--
4Q/02	192.1	147.6			148.8	0.8%	0.6	-99.6%	#DIV/0!	--	#DIV/0!	--
4Q/07	245.9	115.3			116.2	0.8%	0.5	-99.6%	#DIV/0!	--	#DIV/0!	--
4Q/12	297.6	95.3			96.0	0.7%	0.4	-99.6%	#DIV/0!	--	#DIV/0!	--
4Q/17 basis	264.5	107.2			108.1	0.8%	0.5	-99.5%	#DIV/0!	--	#DIV/0!	--
Car Hire	0.615	210.40	210.4	0.0%	216.9	3.1%		--		--		--
Lease Rents	0.385	231.50	231.5	0.0%	235.5	1.7%	0.0	--	0.0	--	0.0	--
Weighted Avg Eq Rents		219.20	218.5	-0.3%	224.1	2.6%	0.0	--	0.0	--	0.0	--
Linked Equipment Rents		230.50			236.4	2.6%	0.0	#####	#DIV/0!	--	#DIV/0!	--
Preliminary RCAF		1.072			1.081	0.84%	0.005	-99.5%	#DIV/0!	--	#DIV/0!	--
Forecast Error Adj.		(0.011)			(0.002)							
RCAF Unadjusted		1.061			1.079	1.70%	0.005	-99.5%	#DIV/0!	--	#DIV/0!	--
PAF		2.3641			2.3617	-0.10%		--		--		--
RCAF Adjusted		0.449			0.457	1.78%	#DIV/0!	--	#DIV/0!	--	#DIV/0!	--
PAF-5		2.5298			2.5260	-0.15%		--		--		--
RCAF-5		0.419			0.427	1.91%	#DIV/0!	--	#DIV/0!	--	#DIV/0!	--

RCAF All-Inclusive Index's Labor Index Based on 2017 Benchmarks

	17 Wts.	3Q/18	3Q/18 Rebenched As Info Only	% Chg	4Q/18	% Chg	1Q/19	% Chg	2Q/19	% Chg	3Q/19	% Chg
Straight Time		\$35.154	\$35.524	1.1%	\$35.537	1.1%	--	--	--	--	--	--
PFTNW		\$6.839	\$6.933	1.4%	\$6.936	1.4%	--	--	--	--	--	--
Total		\$41.993	\$42.457	1.1%	\$42.473	1.1%	\$0.000	--	\$0.000	--	\$0.000	--
Adjustments												
Lump Sum		\$0.390	\$0.401		\$0.400							
Back Pay		\$1.232	\$1.268		\$1.283							
Other		\$0.177	\$0.182		\$0.182							
Total Wages		\$43.792	\$44.308	1.2%	\$44.338	1.2%	\$0.000	--	\$0.000	--	\$0.000	--
Pre-Tax Reduction		(\$1.361)	(\$1.362)		(\$1.362)							
Taxable Wages		\$42.431	\$42.946		\$42.976		\$0.000		\$0.000		\$0.000	
H & W		\$8.101	\$8.229	1.6%	\$8.229	1.6%	--	--	--	--	--	--
RR Ret & Medicare		\$8.867	\$9.064	2.2%	\$9.069	2.3%	--	--	--	--	--	--
Unemp. Insurance		\$0.365	\$0.360	-1.4%	\$0.360	-1.4%	--	--	--	--	--	--
Other		\$0.288	\$0.297	3.1%	\$0.146	-49.3%	--	--	--	--	--	--
Total		\$17.621	\$17.950	1.9%	\$17.804	1.0%	\$0.000	--	\$0.000	--	\$0.000	--
Adjustments												
Total Supplements		\$17.621	\$17.950	1.9%	\$17.804	1.0%	\$0.000	--	\$0.000	--	\$0.000	--
Total Labor		\$61.413	\$62.258	1.4%	\$62.142	1.2%	\$0.000	--	\$0.000	--	\$0.000	--
Wage Rate Index	0.6950	374.8	379.2	1.2%	379.4	1.2%	0.0	--	0.0	--	0.0	--
Supplements Index	0.3050	651.2	663.3	1.9%	657.9	1.0%	0.0	--	0.0	--	0.0	--
Total Labor Index '16 Wts.		455.5										
Total Labor Index '17 Wts.		459.1	465.9	1.5%	464.3	1.1%	0.0	--	0.0	--	0.0	--
Labor Index (Linked)		434.3			439.2	1.1%	0.0	#####	#DIV/0!	--	#DIV/0!	--

Hourly Rate for 2018 Q4

Straight Time and Time Paid For But Not Worked

2018Q4 Straight Time Hourly Rate (from national spreadsheet) \$35.436
 Rebenchmark, with some formerly independent joining national

Adjustments to 2017 base:

Added 2018 Q1			
Miscellaneous Independents	Non-Union GWI and COLAs		0.003
Soo Corp.	nothing		0.000
Added 2018 Q2			
Miscellaneous Independents	retro increases for one railroad union		0.005
Soo Corp.	nothing		0.000
Added 2018 Q3			
Miscellaneous Independents	GWIs and COLAs		0.080
Soo Corp.	nothing		0.000
Added 2018 Q4			
Miscellaneous Independents			0.011
Soo Corp.			0.002

Adjusted STHR Total **\$35.537**

Pay For Time Not Worked

PFTNW (from national spreadsheet) \$6.916
 Ratio Adj STHR to Nat STHR 35.537 / 35.436 = 1.00285

Adjusted Pay For Time Not Worked **\$6.936**

Adjusted STHR + Adjusted Pay For Time Not Worked **\$42.473**

Notes:

1. Miscellaneous Independent is mostly trainmen, yardmasters, and non-union plus CN's IAM employees.
 Includes 20 union groups with employees and 5 non-union groups with employees.
2. Soo Corp. includes SOO, D&H and DM&E.

National Contracts U.S.

Straight Time Hourly Rate

	UTU ✓	TCU ✓	BLET ✓	SMWIA ✓	BRS ✓	BMWE ✓	TCU-CAR ✓	NCFO ✓	IAM ✓	IBBM ✓	IBEW ✓	ATDA ✓	YDMSTR ✓	OTHER ✓	Check Sum
Weight	0.23292	0.03167	0.17443	0.00564	0.05048	0.14303	0.05703	0.01457	0.04204	0.00513	0.03523	0.01431	0.01047	0.18304	1.00000
2017 Avg.	28.982 ✓	29.972 ✓	32.461 ✓	30.384 ✓	31.721 ✓	28.054 ✓	29.913 ✓	25.319 ✓	30.386 ✓	29.362 ✓	30.787 ✓	41.791 ✓	40.528 ✓	49.879 ✓	459.540 ✓
12/31/17	28.982 ✓	29.980 ✓	32.538 ✓	30.384 ✓	31.723 ✓	28.054 ✓	29.916 ✓	25.321 ✓	30.388 ✓	29.364 ✓	30.787 ✓	41.791 ✓	40.528 ✓	49.879 ✓	459.635 ✓
1/1/18	30.086	29.980	33.361	30.384	32.975	28.054	29.916	25.321	30.388	29.364	30.787	42.916	41.616	50.876	
4/1/18	30.086	31.111	33.361	30.384	32.975	28.054	31.086	26.329	30.388	29.364	30.787	42.916	41.616	50.876	
7/1/18	30.795	31.871	33.883	32.396	33.786	29.870	31.853	26.984	30.388	31.208	32.810	43.630	42.307	50.876	
10/1/18	30.795	31.871	33.883	32.396	33.786	29.870	31.853	26.984	30.388	31.208	32.810	43.630	42.307	50.876	
1/1/19	30.795	31.871	33.883	32.396	33.786	29.870	31.853	26.984	30.388	31.208	32.810	43.630	42.307	50.876	
4/1/19	30.795	31.871	33.883	32.396	33.786	29.870	31.853	26.984	30.388	31.208	32.810	43.630	42.307	50.876	
7/1/19	30.795	31.871	33.883	32.396	33.786	29.870	31.853	26.984	30.388	31.208	32.810	43.630	42.307	50.876	

Weighted Straight Time Hourly Rate

	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTR	OTHER	Total
2017 Avg.	6.750	0.949	5.662	0.171	1.601	4.013	1.706	0.369	1.278	0.151	1.085	0.598	0.424	9.130	33.887
12/31/17	6.751	0.949	5.676	0.171	1.601	4.013	1.706	0.369	1.278	0.151	1.085	0.598	0.424	9.130	33.901
1/1/18	7.008	0.949	5.819	0.171	1.665	4.013	1.706	0.369	1.278	0.151	1.085	0.614	0.436	9.312	34.575
4/1/18	7.008	0.985	5.819	0.171	1.665	4.013	1.773	0.384	1.278	0.151	1.085	0.614	0.436	9.312	34.692
7/1/18	7.173	1.009	5.910	0.183	1.705	4.272	1.817	0.393	1.278	0.160	1.156	0.625	0.443	9.312	35.436
10/1/18	7.173	1.009	5.910	0.183	1.705	4.272	1.817	0.393	1.278	0.160	1.156	0.625	0.443	9.312	35.436
1/1/19	7.173	1.009	5.910	0.183	1.705	4.272	1.817	0.393	1.278	0.160	1.156	0.625	0.443	9.312	35.436
4/1/19	7.173	1.009	5.910	0.183	1.705	4.272	1.817	0.393	1.278	0.160	1.156	0.625	0.443	9.312	35.436
7/1/19	7.173	1.009	5.910	0.183	1.705	4.272	1.817	0.393	1.278	0.160	1.156	0.625	0.443	9.312	35.436

Note: The 2017 Average and 12/31/17 Straight Time Hourly Rates are the industry rates, and include all Class I railroad employees. The rates for 1/1/18 through 7/1/19 are based on the industry year-end rates updated by NATIONAL UNION wage increases using contract information. These national increases are diluted using "percent national" ratios to account for non-national union contracts. The impacts of non-national (or independent contract) increases after 2017 are not shown on this page and are handled separately.

National Contracts U.S.

Pay For Time Not Worked Hourly Rate															Check Sum
Weight	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTR	OTHER	
2017 Avg.	0.23292	0.03167	0.17443	0.00564	0.05048	0.14303	0.05703	0.01457	0.04204	0.00513	0.03523	0.01431	0.01047	0.18304	1.00000
12/31/17	9.679	4.424	11.164	4.546	6.659	5.243	4.325	3.364	4.923	4.483	5.037	6.588	7.827	1.264	79.527
1/1/18	10.048	4.425	11.473	4.547	6.922	5.243	4.325	3.364	4.924	4.484	5.037	6.765	8.037	1.289	
4/1/18	10.048	4.592	11.473	4.547	6.922	5.243	4.495	3.499	4.924	4.484	5.037	6.765	8.037	1.289	
7/1/18	10.284	4.704	11.653	4.848	7.093	5.582	4.605	3.586	4.924	4.765	5.368	6.877	8.170	1.289	
10/1/18	10.284	4.704	11.653	4.848	7.093	5.582	4.605	3.586	4.924	4.765	5.368	6.877	8.170	1.289	
1/1/19	10.284	4.704	11.653	4.848	7.093	5.582	4.605	3.586	4.924	4.765	5.368	6.877	8.170	1.289	
4/1/19	10.284	4.704	11.653	4.848	7.093	5.582	4.605	3.586	4.924	4.765	5.368	6.877	8.170	1.289	
7/1/19	10.284	4.704	11.653	4.848	7.093	5.582	4.605	3.586	4.924	4.765	5.368	6.877	8.170	1.289	

Pay For Time Not Worked Hourly Rate															
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTR	OTHER	Total
2017 Avg.	2.254	0.140	1.947	0.026	0.336	0.750	0.247	0.049	0.207	0.023	0.177	0.094	0.082	0.231	6.564
12/31/17	2.254	0.140	1.952	0.026	0.336	0.750	0.247	0.049	0.207	0.023	0.177	0.094	0.082	0.231	6.569
1/1/18	2.340	0.140	2.001	0.026	0.349	0.750	0.247	0.049	0.207	0.023	0.177	0.097	0.084	0.236	6.727
4/1/18	2.340	0.145	2.001	0.026	0.349	0.750	0.256	0.051	0.207	0.023	0.177	0.097	0.084	0.236	6.744
7/1/18	2.395	0.149	2.033	0.027	0.358	0.798	0.263	0.052	0.207	0.024	0.189	0.098	0.086	0.236	6.916
10/1/18	2.395	0.149	2.033	0.027	0.358	0.798	0.263	0.052	0.207	0.024	0.189	0.098	0.086	0.236	6.916
1/1/19	2.395	0.149	2.033	0.027	0.358	0.798	0.263	0.052	0.207	0.024	0.189	0.098	0.086	0.236	6.916
4/1/19	2.395	0.149	2.033	0.027	0.358	0.798	0.263	0.052	0.207	0.024	0.189	0.098	0.086	0.236	6.916
7/1/19	2.395	0.149	2.033	0.027	0.358	0.798	0.263	0.052	0.207	0.024	0.189	0.098	0.086	0.236	6.916

U.S. National Contract

UTU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				28.98227	9.67903
12/31/17 Industry Rate				28.98240	9.67907
1/1/18	4.04% ✓		94.268% ✓	30.08618	10.04769
4/1/18			94.268%	30.08618	10.04769
7/1/18	2.50% ✓		94.268%	30.79522	10.28449
10/1/18			94.268%	30.79522	10.28449
1/1/19			94.268%	30.79522	10.28449
4/1/19			94.268%	30.79522	10.28449
7/1/19			94.268%	30.79522	10.28449

The 4.04% GWI combines two retroactive GWIs of 2% for 7/1/2016 and 7/1/2017 in the new labor agreement.

TCU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				29.97179	4.42391
12/31/17 Industry Rate				29.97976	4.42509
1/1/18			97.817% ✓	29.97976	4.42509
4/1/18	4.04% ✓		97.817%	31.11058	4.59200
7/1/18	2.50% ✓		97.817%	31.87136	4.70430
10/1/18			97.817%	31.87136	4.70430
1/1/19			97.817%	31.87136	4.70430
4/1/19			97.817%	31.87136	4.70430
7/1/19			97.817%	31.87136	4.70430

\$31.164 adjusted to remove COLAs received by 5 RRs.

BLET

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				32.46149	11.16408
12/31/17 Industry Rate				32.53834	11.19051
1/1/18	4.04% ✓		62.576% ✓	33.36094	11.47341
4/1/18			62.576%	33.36094	11.47341
7/1/18	2.50% ✓		62.576%	33.88284	11.65291
10/1/18			62.576%	33.88284	11.65291
1/1/19			62.576%	33.88284	11.65291
4/1/19			62.576%	33.88284	11.65291
7/1/19			62.576%	33.88284	11.65291

SMWIA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.		\$32.402 adjusted to remove COLAs received by 1 RR.		30.38359	4.54644
12/31/17 Industry Rate				30.38444	4.54657
1/1/18			100.000%	30.38444	4.54657
4/1/18			100.000%	30.38444	4.54657
7/1/18	6.641% ✓		100.000%	32.39626	4.84761
10/1/18			100.000%	32.39626	4.84761
1/1/19			100.000%	32.39626	4.84761
4/1/19			100.000%	32.39626	4.84761
7/1/19			100.000%	32.39626	4.84761

The 6.641% combines 2.0% GWIs retroactive to 7/1/2016 and 7/1/2017 and 2.5% GWI 7/1/2018.

BRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.		\$32.983 adjusted to remove COLAs received by 2 RRs.		31.72130	6.65928
12/31/17 Industry Rate				31.72271	6.65957
1/1/18	4.04% ✓		98.368%	32.97506	6.92248
4/1/18			98.368%	32.97506	6.92248
7/1/18	2.50% ✓		98.368%	33.78598	7.09272
10/1/18			98.368%	33.78598	7.09272
1/1/19			98.368%	33.78598	7.09272
4/1/19			98.368%	33.78598	7.09272
7/1/19			98.368%	33.78598	7.09272

BMWE

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				28.05381	5.24311
12/31/17 Industry Rate				28.05381	5.24311
1/1/18			97.469% ✓	28.05381	5.24311
4/1/18			97.469%	28.05381	5.24311
7/1/18	6.641% ✓		97.469%	29.86971	5.58250
10/1/18			97.469%	29.86971	5.58250
1/1/19			97.469%	29.86971	5.58250
4/1/19			97.469%	29.86971	5.58250
7/1/19			97.469%	29.86971	5.58250

U.S. National Contract

TCU-Carmen

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				29.91308	4.32501
12/31/17 Industry Rate				29.91616	4.32546
1/1/18			98.637%	29.91616	4.32546
4/1/18	4.04%		98.637%	31.08611	4.49462
7/1/18	2.50%		98.637%	31.85267	4.60545
10/1/18			98.637%	31.85267	4.60545
1/1/19			98.637%	31.85267	4.60545
4/1/19			98.637%	31.85267	4.60545
7/1/19			98.637%	31.85267	4.60545

\$31.108 adjusted to remove COLAs received by 5 RRs.

NCFO

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				25.31937	3.36430
12/31/17 Industry Rate				25.32063	3.36447
1/1/18			99.477%	25.32063	3.36447
4/1/18	4.04%		99.477%	26.32949	3.49852
7/1/18	2.50%		99.477%	26.98428	3.58553
10/1/18			99.477%	26.98428	3.58553
1/1/19			99.477%	26.98428	3.58553
4/1/19			99.477%	26.98428	3.58553
7/1/19			99.477%	26.98428	3.58553

\$26.338 adjusted to remove COLAs received by 3 RRs.

IAM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				30.38573	4.92337
12/31/17 Industry Rate				30.38767	4.92368
1/1/18			95.374%	30.38767	4.92368
4/1/18			95.374%	30.38767	4.92368
7/1/18			95.374%	30.38767	4.92368
10/1/18			95.374%	30.38767	4.92368
1/1/19			95.374%	30.38767	4.92368
4/1/19			95.374%	30.38767	4.92368
7/1/19			95.374%	30.38767	4.92368

IBBM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.		\$31.225 adjusted to remove COLAs received by 1 RR.		29.36225	4.48340
12/31/17 Industry Rate				29.36371	4.48362
1/1/18			95.453%	29.36371	4.48362
4/1/18			95.453%	29.36371	4.48362
7/1/18	6.641%		95.453%	31.20784	4.76520
10/1/18			95.453%	31.20784	4.76520
1/1/19			95.453%	31.20784	4.76520
4/1/19			95.453%	31.20784	4.76520
7/1/19			95.453%	31.20784	4.76520

IBEW

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				30.78745	5.03687
12/31/17 Industry Rate				30.78745	5.03687
1/1/18			98.937%	30.78745	5.03687
4/1/18			98.937%	30.78745	5.03687
7/1/18	6.641%		98.937%	32.81030	5.36781
10/1/18			98.937%	32.81030	5.36781
1/1/19			98.937%	32.81030	5.36781
4/1/19			98.937%	32.81030	5.36781
7/1/19			98.937%	32.81030	5.36781

ATDA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				41.79089	6.58753
12/31/17 Industry Rate				41.79089	6.58753
1/1/18	4.04%		66.619%	42.91565	6.76483
4/1/18			66.619%	42.91565	6.76483
7/1/18	2.50%		66.619%	43.63040	6.87750
10/1/18			66.619%	43.63040	6.87750
1/1/19			66.619%	43.63040	6.87750
4/1/19			66.619%	43.63040	6.87750
7/1/19			66.619%	43.63040	6.87750

YDMSTRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				40.52842	7.82686
12/31/17 Industry Rate				40.52842	7.82686
1/1/18	4.04% ✓		66.411% ✓	41.61580	8.03686
4/1/18			66.411%	41.61580	8.03686
7/1/18	2.50% ✓		66.411%	42.30674	8.17029
10/1/18			66.411%	42.30674	8.17029
1/1/19			66.411%	42.30674	8.17029
4/1/19			66.411%	42.30674	8.17029
7/1/19			66.411%	42.30674	8.17029

OTHER

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2017 Industry Avg.				49.87891	1.26398
12/31/17 Industry Rate				49.87891	1.26398
1/1/18	2.00% ✓		100.000% ✓	50.87649	1.28926
4/1/18			100.000%	50.87649	1.28926
7/1/18			100.000%	50.87649	1.28926
10/1/18			100.000%	50.87649	1.28926
1/1/19			100.000%	50.87649	1.28926
4/1/19			100.000%	50.87649	1.28926
7/1/19			100.000%	50.87649	1.28926

Check Sums

	Increase	Applicable	ST HR	PFTNW HR
2017 AVG			459.54035	79.52719
12/31/17			459.63529	
		1271.406%		
		ok matches	ok matches	ok matches
			ok matches	

Should match check sum on National Increase Applicability for U.S. Total page.

All three should match check sums on U.S. Benchmark page.

U.S. 2017 Benchmark

	From AAR 112-Class Wage Statistics & Survey				ST \$ Adjusted to Exclude Lump Sums	2017 Average Hourly Rates		12/31/2017 ST HR	ST Hrs. 2017 Weights
	ST Hrs.	ST \$	PFTNW \$	Union L. Sum		ST wo LS	PFTNW		
UTU	66,893,869	\$1,953,980,612	\$647,467,600	\$15,244,612	\$1,938,736,000	\$28.982 ✓	\$9.679 ✓	\$28.98240 ✓	0.23292
TCU	9,094,833	284,663,704	40,234,756	12,075,275	272,588,429	29.972 ✓	4.424 ✓	\$29.97976 ✓	0.03167
BLET	50,095,640	1,738,042,440	559,271,737	111,863,288	1,626,179,152	32.461 ✓	11.164 ✓	\$32.53834 ✓	0.17443
SMWIA	1,620,871	49,255,293	7,369,200	7,418	49,247,875	30.384 ✓	4.546 ✓	\$30.38444 ✓	0.00564
BRS	14,497,307	460,393,856	96,541,584	520,420	459,873,436	31.721 ✓	6.659 ✓	\$31.72271 ✓	0.05048
BMWE	41,079,028	1,153,238,094	215,382,011	815,017	1,152,423,077	28.054 ✓	5.243 ✓	\$28.05381 ✓	0.14303
TCU-CAR	16,378,588	490,172,881	70,837,629	238,869	489,934,012	29.913 ✓	4.325 ✓	\$29.91616 ✓	0.05703
NCFO	4,185,745	106,066,080	14,082,107	85,661	105,980,419	25.319 ✓	3.364 ✓	\$25.32063 ✓	0.01457
IAM	12,074,757	367,197,312	59,448,454	296,972	366,900,340	30.386 ✓	4.923 ✓	\$30.38767 ✓	0.04204
IBBM	1,474,484	43,319,407	6,610,698	25,233	43,294,174	29.362 ✓	4.483 ✓	\$29.36371 ✓	0.00513
IBEW	10,117,502	311,812,882	50,960,563	320,780	311,492,102	30.787 ✓	5.037 ✓	\$30.78745 ✓	0.03523
ATDA	4,111,161	174,777,254	27,082,415	2,968,186	171,809,068	41.791 ✓	6.588 ✓	\$41.79089 ✓	0.01431
UTU-YMD	3,007,338	123,922,480	23,538,022	2,039,826	121,882,654	40.528 ✓	7.827 ✓	\$40.52842 ✓	0.01047
OTHER	52,568,366	2,622,053,012	66,445,460	0	2,622,053,012	49.879 ✓	1.264 ✓	\$49.87891 ✓	0.18304
AAR 112 Total	287,199,489	9,878,895,307	1,885,272,236	146,501,557	9,732,393,750	33.887 ✓	6.564 ✓	33.901 ✓	1.00000
Sum (for proofing)	✓	✓	✓	✓		459.54035	79.52719	459.63529	
						✓	✓	✓	

Year-End Figures are calculated, based on 2017 WS-112 and union contracts, in YearEnd2017.xlsx exhibited in document titled "Year-End 2017 ST Hourly Rates for U.S."
The ST Hours Weights and the Hourly Rates are full float.

National Increase Applicability for U.S. Total

Union	Year 2017 U.S. Total ST Hours Pd	Not Part of National Agreements*													U.S. National Increase ST Hours Pd	Percent National Contract
		CSX	BLE	GTW	IC	CCP	WC	NS	BNSF	KCS	SOO	DH	DME	UP		
UTU	66,893,869	--	X	X	X	X	X	--	--	--	X	X	X	--	63,059,631	94.268%
TCU	9,094,833	--	--	--	--	--	--	--	--	--	X	X	X	--	8,896,255	97.817%
BLET	50,095,640	X	X	X	X	X	X	X	--	--	X	X	X	--	31,348,054	62.576%
SMW	1,620,871	--	X	X	--	X	X	--	--	--	X	X	X	--	1,620,871	100.000%
BRS	14,497,307	--	--	--	--	--	--	--	--	--	X	X	X	--	14,260,664	98.368%
BMWE	41,079,028	--	--	--	--	--	--	--	--	--	X	X	X	--	40,039,320	97.469%
TCU-CAR	16,378,588	--	--	--	--	--	--	--	--	--	X	X	X	--	16,155,347	98.637%
NCFO	4,185,745	--	--	--	--	--	X	--	--	--	X	X	X	--	4,163,870	99.477%
IAM	12,074,757	--	X	X	X	X	X	--	--	--	X	X	X	--	11,516,206	95.374%
IBBM	1,474,484	--	X	X	--	X	X	--	--	--	X	X	X	--	1,407,444	95.453%
IBEW	10,117,502	--	--	--	--	--	--	--	--	--	X	X	X	--	10,009,904	98.937%
ATDA	4,111,161	--	X	X	X	X	--	--	--	--	X	X	X	X	2,738,816	66.619%
UTU-YMD	3,007,338	--	X	X	X	X	X	--	--	--	X	X	X	X	1,997,207	66.411%
OTHER	52,568,366	--	--	--	--	--	--	--	--	--	--	--	--	--	52,568,366	100.000%
TOTAL	287,199,489														259,781,955	
Sum (for proofing)																1271.406%

Percentages are full float.

2.080%

WSJ 8/28/2018

Borrowing Benchmarks | WSJ.com/bonds

Money Rates

Key annual interest rates paid to borrow or lend money in U.S. and international markets. Rates below are a guide to general levels but don't always represent actual transactions.

August 27, 2018

Inflation			
July index level	Chg From (%)	June '18	July '17
U.S. consumer price index			
All items	252.006	0.01	2.9
Core	257.867	0.07	2.4

U.S. consumer price index

All items	252.006	0.01	2.9
Core	257.867	0.07	2.4

International rates			
Latest	Week ago	-52-Week-High	Low
Switzerland	0.50	0.50	0.50
Britain	0.75	0.75	0.25
Australia	1.50	1.50	1.50

Prime rates

U.S.	5.00	5.00	5.00	4.25
Canada	3.70	3.70	3.70	2.95
Japan	1.475	1.475	1.475	1.475

Policy Rates

Euro zone	0.00	0.00	0.00	0.00
-----------	------	------	------	------

	Latest	Week ago	-52-Week-High	Low
Switzerland	0.50	0.50	0.50	0.50
Britain	0.75	0.75	0.75	0.25
Australia	1.50	1.50	1.50	1.50

Overnight repurchase

U.S.	2.05	1.97	2.18	1.01
------	------	------	------	------

U.S. government rates

Discount

	2.50	2.50	2.50	1.75
--	------	------	------	------

Federal funds

Effective rate	1.9400	1.9300	1.9500	1.0700
High	2.1500	2.1500	2.1500	1.3125
Low	1.9000	1.8700	1.9100	1.0000
Bid	1.9000	1.8800	1.9200	1.0600

	Latest	Week ago	-52-Week-High	Low
Offer	1.9300	1.9100	2.1500	1.0700

Treasury bill auction

4 weeks	1.910	1.910	1.910	0.940
13 weeks	2.080	2.035	2.080	1.020
26 weeks	2.210	2.185	2.210	1.115

Secondary market

Fannie Mae

30-year mortgage yields				
30 days	4.146	4.163	4.344	3.253
60 days	4.168	4.185	4.371	3.281

Other short-term rates

	Latest	Week ago	-52-Week-High	Low
Call money	3.75	3.75	3.75	3.00

Call money

	3.75	3.75	3.75	3.00
--	------	------	------	------

Commercial paper (AA financial)

90 days	2.15	2.25	2.31	1.14
---------	------	------	------	------

Libor

One month	2.0725	2.06700	2.10288	1.23056
Three month	2.3175	2.30963	2.36906	1.31033
Six month	2.52300	2.50863	2.53363	1.44767
One year	2.82000	2.81300	2.83213	1.69511

Euro Libor

One month	-0.393	-0.398	-0.393	-0.420
Three month	-0.361	-0.363	-0.349	-0.389
Six month	-0.305	-0.309	-0.303	-0.339
One year	-0.219	-0.226	-0.206	-0.263

Euro interbank offered rate (Euribor)

One month	-0.370	-0.369	-0.366	-0.373
Three month	-0.319	-0.319	-0.319	-0.331
Six month	-0.265	-0.266	-0.265	-0.279
One year	-0.166	-0.167	-0.159	-0.194

	Latest	Value	-52-Week-High	Low
DTCC GCF Repo Index	2.037	55.050	2.233	1.022

DTCC GCF Repo Index

Treasury	2.037	55.050	2.233	1.022
MBS	2.046	121.950	2.321	1.038

	Settle	Change	Open Implied Interest	Rate
DTCC GCF Repo Index Futures	97.995	-0.005	1434	2.005

DTCC GCF Repo Index Futures

Treasury Aug	97.995	-0.005	1434	2.005
Treasury Sep	97.950	-0.005	1927	2.050
Treasury Oct	97.760	unch.	693	2.240

Notes on data:

U.S. prime rate is the base rate on corporate loans posted by at least 70% of the 10 largest U.S. banks, and is effective June 14, 2018. Other prime rates aren't directly comparable; lending practices vary widely by location. Discount rate is effective June 14, 2018. DTCC GCF Repo Index is Depository Trust & Clearing Corp.'s weighted average for overnight trades in applicable CUSIPs. Value traded is in billions of U.S. dollars. Federal funds rates are Tullett Prebon rates as of 5:30 p.m. ET. Futures on the DTCC GCF Repo Index are traded on NYSE Life U.S.

Sources: Federal Reserve; Bureau of Labor Statistics; DTCC; SIX Financial Information; Tullett Prebon Information, Ltd.

563.10	-1.1	Double-A-rated	3.370	2.470
710.29	-1.7	Triple-B-rated	4.220	3.340

High Yield Bonds Merrill Lynch

425.83	2.0	High Yield Constrained	6.238	5.373
440.78	4.9	Triple-C-rated	9.938	9.957
2919.18	2.0	High Yield 100	5.809	4.977
380.65	0.5	Global High Yield Constrained	6.074	4.934
306.03	-0.1	Europe High Yield Constrained	3.304	1.897

U.S. Agency Bloomberg Barclays

1635.59	-0.2	U.S. Agency	2.850	1.690
1465.11	0.2	10-20 years	2.760	1.510
3320.62	-2.0	20-plus years	3.310	2.730
2437.54	-1.1	Yankee	3.680	2.610

* Constrained indexes limit individual issuer concentrations to 2%; th
* EMBI Global Index

Global Government Bonds: Mapping Yield

Corporate Debt

Price moves by a company's debt in the credit market that same company's share price.

Investment-grade spreads that tightened

Issuer	Symbol	Coupon (%)	Maturity
BP Capital Markets	BPLN	3.561	Nov
National Australia Bank	NAB	3.375	Sept
Oracle	ORCL	2.950	May
Microsoft	MSFT	2.375	Mar
General Electric	GE	5.000	Jan
Starbucks	SBUX	2.100	Feb
Campbell Soup	CPB	4.150	March
E.I. du Pont de Nemours And Co	DD	2.800	Feb

And spreads that widened the most

Bank of America	BAC	2.503	Oct
Aviation Capital	PACLF	4.125	Aug
Goldman Sachs	GS	2.600	Dec
Becton Dickinson And Co	BDX	3.363	Jul
Commonwealth Bank of Australia	CBAU	3.900	Jul
IBM Credit	IBM	2.650	Feb
JPMorgan Chase	JPM	2.700	Mar
Celgene	CELG	3.875	Aug

High-yield issues with the biggest price decreases

Issuer	Symbol	Coupon (%)	Maturity
Endo Finance	ENDP	5.375	Jan
NRG Energy	NRG	5.750	Jan
Murray Energy	MURREN	11.250	Apr
PetSmart	PETM	5.875	Jul
Ally Financial	ALLY	8.000	Nov
American Axle & Manufacturing	AXL	6.250	Apr
California Resources	CRC	8.000	Dec
Freeport-McMoran	FCX	5.450	Mar

And with the biggest price decreases

Ultra Resources	UPL	7.125	Apr
MasTec	MTZ	4.875	Mar
CenturyLink	CTL	7.600	Sep
Charter Communications Operating	CHTR	5.375	Nov
Gray Television	GTN	5.125	Oct
Naviant	NAVI	6.500	Jul
Hilton Domestic Operating	HILDOC	5.125	Apr
Chobani	CHBANI	7.500	Nov

* Estimated spread over 2-year, 3-year, 5-year, 10-year or 30-year h
Note: Data are for the most active issue of bonds with maturities o

Key Interest Rates

Data are annualized on a 360-day basis. Treasury yields are per annum, on actively traded noninflation and inflation-indexed issues that are adjusted to constant maturities. Data are from weekly Federal Reserve release H.15.

	Week Ended Aug 24	Aug 17	-52-Week-High	Low
--	-------------------	--------	---------------	-----

Federal funds (effective)	1.92	1.91	1.92	1.12
---------------------------	------	------	------	------

Commercial paper

Nonfinancial				
1-month	1.95	1.95	1.97	1.10
2-month	2.03	2.03	2.05	1.13
3-month	2.13	2.10	2.13	1.16

Financial				
1-month	1.97	2.03	2.03	1.07
2-month	2.05	2.07	2.09	1.19
3-month	2.16	2.19	2.28	1.23

Discount window primary credit

	2.50	2.50	2.50	1.75
--	------	------	------	------

Conventional mortgages

	n.a.	n.a.	n.a.	n.a.
--	------	------	------	------

Treasury yields at constant maturities

1-month	1.94	1.95	1.95	0.96
3-month	2.08	2.07	2.08	1.01
6-month	2.24	2.24	2.24	1.11
1-year	2.44	2.44	2.44	1.23
2-year	2.61	2.62	2.66	1.29
3-year	2.66	2.69	2.76	1.40
5-year	2.71	2.75	2.91	1.65
7-year	2.78	2.82	3.03	1.90
10-year	2.83	2.87	3.07	2.07
20-year	2.91	2.96	3.14	2.43

Treasury yields (secondary market)

1-month	1.91	1.92	1.92	0.95
3-month	2.04	2.03	2.04	0.99
6-month	2.19	2.18	2.19	1.09

TIPS

5-year	0.74	0.77	0.85	0.05
7-year	0.74	0.78	0.89	0.24
10-year	0.74	0.79	0.91	0.28
20-year	0.82	0.86	0.98	0.60
Long-term avg	0.86	0.91	1.00	0.65

Interest rate swaps

1-year	n.a.	n.a.	n.a.	n.a.
2-year	n.a.	n.a.	n.a.	n.a.
3-year	n.a.	n.a.	n.a.	n.a.
4-year	n.a.	n.a.	n.a.	n.a.
5-year	n.a.	n.a.	n.a.	n.a.
7-year	n.a.	n.a.	n.a.	n.a.
10-year	n.a.	n.a.	n.a.	n.a.
30-year	n.a.	n.a.	n.a.	n.a.

Corporate bonds, Moody's seasoned

Aaa	n.a.	n.a.	n.a.	n.a.
Baa	n.a.	n.a.	n.a.	n.a.

State and local bonds

	n.a.	n.a.	n.a.	n.a.
--	------	------	------	------

Eurodollars

1 month	n.a.	n.a.	n.a.	n.a.
3 month	n.a.	n.a.	n.a.	n.a.
6 month	n.a.	n.a.	n.a.	n.a.

Notes on data:

Federal funds rate is an average for the seven days ended Wednesday, weighted according to rates on broker trades. Commercial paper rates are discounted offer rates interpolated from sales by discounted averages of dealer bid rates on nationally traded certificates of deposit. Discount window primary credit rate is charged for discounts made and advances extended under the Federal Reserve's primary credit discount window program; rate is average for seven days ended Wednesday. Inflation-indexed long-term TIPS average is indexed and is based on the unweighted average bid yields for all TIPS with remaining terms to maturity of 10 years or more. Swap rates are international Swaps and Derivatives Association (ISDA(R)) mid-market par rates for a fixed-rate payer, who in return receives three-month Libor, and are based on rates collected at 11:00 a.m. ET by Garban InterCapital PLC. Source is Reuters; Moody's triple-AAA rates are averages of industrial bonds only; Muni rates are Thursday quotes based on the Bond Buyer Index for general obligation, 20 years to maturity, mixed quality debt; Mortgage rates are contract rates on commitments for fixed-rate first mortgages

Sources: Federal Reserve; for additional information on these rate data and their derivation, please see: www.federalreserve.gov/releases/h15/data.htm

RCAF Lump Sum Amortization 2018/Q4

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hour	U.S. ST Hours
NS - BLET 2017Q3 PPI	2017Q4	2018Q1				287,199,489
CSX - BLET 2018	2018Q1	2018Q2				287,199,489
KCS 2018Q2	2017Q4	2018Q2				287,199,489
NS - BLET 2017Q4 PPI	2018Q1	2018Q2				287,199,489
NS - BLET 2018 Ave PPI	2018Q1	2018Q2				287,199,489
NS - BLET 2018 TPB	2018Q1	2018Q2				287,199,489
NS - BLET 2018Q1 PPI	2018Q2	2018Q3				287,199,489
NS - BLET 2018Q2 PPI	2018Q3	2018Q4				287,199,489
Total			\$113,461,893	0.39506		

Should be slightly less
than amortized amount.

Fell out

NS - BLET 2017Q2 PPI	2017Q3	2017Q4				295,539,752
----------------------	--------	--------	--	--	--	-------------

Interest Rate

2017/Q1	0.480
2017/Q2	0.540
2017/Q3	0.920
2017/Q4	1.070
2018/Q1	1.285
2018/Q2	1.570
2018/Q3	1.880
2018/Q4	2.080
2019/Q1	
2019/Q2	
2019/Q3	
2019/Q4	

Lump Sum Adjustment for 2018/Q4 → 0.399867
or
0.400

RCAF Back Pay Amortization 2018/Q4

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hr.	U.S. ST Hours	
National UTU-YMD 2017	2018Q1	2018Q1	\$4,335,581	0.01509606	0.06038	287,199,489	2017
National UTU 2017	2018Q1	2018Q1	\$96,372,104	0.33555806	1.34223	287,199,489	2017
National BRS 2017	2018Q1	2018Q1	\$22,525,654	0.07843208	0.31373	287,199,489	2017
National BLET 2017	2018Q1	2018Q1	\$51,247,884	0.17844003	0.71376	287,199,489	2017
National ATDA 2017	2018Q1	2018Q1	\$5,926,972	0.02063712	0.08255	287,199,489	2017
National BRC (TCU-CAR) 2018	2018Q2	2018Q2	\$28,888,465	0.10058676	0.40235	287,199,489	2017
National TCU 2018	2018Q2	2018Q2	\$16,365,434	0.05698281	0.22793	287,199,489	2017
National NCFO 2017	2018Q2	2018Q2	\$6,257,945	0.02178954	0.08716	287,199,489	2017
DME - all unions 2018	2018Q1	2018Q2				287,199,489	2017
UP Yardmasters 2018	2018Q2	2018Q2				287,199,489	2017
National IBBM 2018	2018Q2	2018Q3	\$2,965,203	0.01032454	0.04130	287,199,489	2017
CSX BLET 2017	2018Q1	2018Q3				287,199,489	2017
National IBEW 2018	2018Q2	2018Q3	\$22,468,731	0.07823388	0.31294	287,199,489	2017
National SMW 2018	2018Q2	2018Q3	\$3,424,677	0.01192438	0.04770	287,199,489	2017
National BMW 2018	2018Q2	2018Q3	\$76,685,654	0.26701180	1.06805	287,199,489	2017
Nat. IBEW 2018 offset	2018Q3	2018Q4	(\$1,613,331)	-0.00561746	-0.02247	287,199,489	2017
CN Railroads (5 amounts)	2018Q3	2018Q4				287,199,489	2017
CP Railroads (6 amounts)	2018Q3	2018Q4				287,199,489	2017
Total			\$364,025,907	1.26750193			

Should be slightly less
than amortized amount.

Fell out

None.

Notes:

"UTU" is now called SMART-TD (Transportation Division), and SMW is now called SMART-MD (Mechanical Division)
 CN railroads 2018Q4 = IC BLET, CCP BLET, GTW UTU, GTW UTU-YMD, WC UTU-YMD
 CP railroads 2018Q4 = DH BRC, DH IAM, SOO NCFO, SOO IBEW, SOO BRS, SOO UTU-YDM

Interest Rate

2017/Q1	0.480
2017/Q2	0.540
2017/Q3	0.920
2017/Q4	1.070
2018/Q1	1.285
2018/Q2	1.570
2018/Q3	1.880
2018/Q4	2.080
2019/Q1	
2019/Q2	
2019/Q3	
2019/Q4	

Back Pay Adjustment for 2018/Q4

1.28256
or
1.283

Back Pay for National IBEW Added to RCAF 2018Q4

National IBEW New Contract Signed 5/8/2018

Backpay in the new 2018 IBEW labor agreement was calculated and added to the 2018Q3 RCAF. However, since that time, an arbitration decision decided (on July 17, 2018) that the employees in the 2018 national agreement should have four months at \$73.24 deducted from each employee's back pay. Because the main back pay has already been handled, this portion will cause a negative back pay. All railroads except the CP railroads (DH, DME, and SOO) are in the national agreement for wages. (DH and SOO are in for H&W only)

Per NRLC Circular 877-5.

Employees Paid	5,507	from 2017 wage statistics, national agreement (all railroads except DH, DME, and SOO.)
Amount	\$73.24	
No. of Months	4	
Negative Back Pay	\$1,613,330.72	to be amortized over four quarters as a negative amount for index purposes

NATIONAL RAILWAY LABOR CONFERENCE

251 – 18th STREET, SOUTH, SUITE 750, ARLINGTON, VA 22202 / TELEPHONE: 571-336-7600 FAX: 571-336-7605

A. KENNETH GRADIA
Chairman

JEFFREY F. RODGERS
Vice Chairman

MATT HOLT
Director of Labor Relations

July 25, 2018

CIRCULAR NO. 877-5 (IBEW)

TO MEMBER ROADS:

Please reference our circulars of the 877 series transmitting correspondence for national handling in connection with the 2015 Wage and Rules movement for IBEW.

Attached is a copy of **the Award from Interest Board Arbitration No. 63** rendered by Neutral Member Josh Javits on July 17, 2018 resolving issues related to the parties' health and welfare plan.

Yours very truly,

MATTHEW R. HOLT

Director of Labor Relations

Attachment

ISSUE

In their Interest Arbitration Agreement, the Parties have agreed to the following statement of the issue:

7) The scope of the Arbitration shall be confined to resolution of the following question, which shall be answered Yes or No:

Are the Carriers entitled to a deduction from the payment of retroactive wages equal to \$73.24 per month per employee, dating from February 2018, through May 2018 (four months), on account of delay in implementation of the plan design changes set forth in Article II, Part B, Section 2 of the 2018 Agreement?

DECISION

The central disagreement in this dispute is whether IBEW employees should be required to, in effect, reimburse the Carriers through a reduction to retroactive wages for the four months of health care benefit savings the Carriers would have been entitled to if the IBEW had implemented its agreement at the same time nearly all of the other Unions reached agreement.

The Carriers contend that the four months without the savings was inconsistent with the pattern settlement. The Carriers contend that making an exception for IBEW employees from this obligation would be inequitable to the other Unions, whose members were subject to the health plan changes, which produced the savings during the four month time period.

AWARD

Based on the above and the record as a whole, a majority of the Board answers the parties' issue in the affirmative, "Yes."

Joshua M. Javits

7/17/18

Joshua M. Javits, Neutral Member

Date

A. Kenneth Gracia

7/17/18

A. Kenneth Gracia, Carrier Member

Date

William T. Bohne

7/17/18

William T. Bohne, Union Member

Date

Dissent

Health and Welfare 2018Q4

	Employees Receiving		Total 2017 Avg.	Total 2018
	Pay 2017	Monthly Contribution 2017 Avg. 2018		
1. All Employees				
a. Group health	150,320	\$1,693.72 \$1,584.71	\$254,599,990.40	\$238,213,607.20
b. Group dental	150,320	65.12 63.67	9,788,838.40	9,570,874.40
c. Early retirement major medical	150,320	166.75 135.96	25,065,860.00	20,437,507.20
d. Group vision	150,320	8.44 8.44	1,268,700.80	1,268,700.80
2. Supplemental Sickness				
a. Signalmen	7,462	37.00 44.34	276,094.00	330,865.08
b. Shopcrafts	22,837	60.00 75.48	1,370,220.00	1,723,736.76
c. MOW	23,077	40.00 51.63	923,080.00	1,191,465.51
d. Yardmasters	1,714	34.22 34.22	58,653.08	58,653.08
3. Short-Term Disability				
a. Engineers (CSX, KCS, SOO, UP)	11,805	40.00 40.00	472,200.00	472,200.00
4. Monthly Total Premiums			293,823,636.68	273,267,610.03
5. Monthly Employee Contributions To H&W				
a. National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,712	(\$228.89) (\$228.89)	(\$391,859.68)	(391,859.68)
b. National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	23,736	(\$228.89) (\$228.89)	(\$5,432,933.04)	(5,432,933.04)
c. National BMW (All except SOO, DME, DH)	22,484	(\$228.89) (\$228.89)	(\$5,146,362.76)	(5,146,362.76)
d. National BRS (All except DME)	7,429	(\$228.89) (\$228.89)	(\$1,700,423.81)	(1,700,423.81)
e. National IAM (BNSF, CSX, KCS, NS, SOO, UP)	6,402	(\$228.89) (\$228.89)	(\$1,465,353.78)	(1,465,353.78)
f. National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	836	(\$228.89) (\$228.89)	(\$191,352.04)	(191,352.04)
g. National IBEW (All except DME)	5,550	(\$228.89) (\$228.89)	(\$1,270,339.50)	(1,270,339.50)
h. National NCFO (All except DME and WC)	2,322	(\$228.89) (\$228.89)	(\$531,482.58)	(531,482.58)
i. National SMW (BNSF, CSX, KCS, NS, UP, IC)	906	(\$228.89) (\$228.89)	(\$207,374.34)	(207,374.34)
j. National TCU (All except DME and DH)	5,043	(\$228.89) (\$228.89)	(\$1,154,292.27)	(1,154,292.27)
k. National TCU-CAR (All except DME)	8,861	(\$228.89) (\$228.89)	(\$2,028,194.29)	(2,028,194.29)
l. National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	34,615	(\$228.89) (\$228.89)	(\$7,923,027.35)	(7,923,027.35)
m. Yardmasters (BNSF, CSX, KCS, NS, UP*, SOO, DH)	1,609	(\$228.89) (\$228.89)	(\$368,284.01)	(368,284.01)
n. Misc Indep (DME, portions of DH & SOO, portions of CN)	3,696	(\$231.73) (\$237.13)	(\$856,458.59)	(876,439.77)
Total Major Union	125,201		(\$28,667,738.04)	(\$28,687,719.22)
All Other Employee Contributions*			(\$3,918,543.88)	(\$3,918,543.88)
6. Net Employer Monthly Payments			\$261,237,354.76	\$240,661,346.93
7. Ratio Projected Year to Base Year, Based on Net Monthly Payments				0.92124
8. H&W hourly rate for base year 2017			\$8.933	
9. H&W hourly rate for projected quarter				\$8.229

* Non-union employee contributions net of opt-outs. The \$28,667,738.04 in major union contributions, plus \$3,918,543.88 in all other employee contributions, totals to the 12-month average of the total employee contributions reported to the AAR in its WF survey.

NATIONAL RAILWAY LABOR CONFERENCE EMPLOYEE BENEFITS DEPARTMENT

251 - 18th Street, South, Suite 750, Arlington, VA 22202 ~~~ PHONE: (571) 336-7600

David B. Marcus
Director Employee Benefits
(571) 336-7596
Email: dmarcus@nmrlc.org

Susan E. Parks, CEBS
Benefits Administrator
(571) 336-7625
Email: sparks@nmrlc.org

November 28, 2016

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, 2017 are as follows:

Railroad Employees National Health & Welfare Plan & National Railway Carriers/United Transportation Union H&W Plan Non-Hospital Road	\$1,693.72
Railroad Employees National Early Retirement Major Medical Benefit Plan Non-Hospital Road	\$ 166.75
Aetna - National Dental Plan	\$ 65.12
Aetna - Supplemental Sickness Plans	
Shop Crafts	\$ 60.00
Signalmen	\$ 37.00
Maintenance of Way	\$ 40.00
Trustmark - Supplemental Sickness Plans Yardmasters	\$ 34.22
EyeMed - National Vision Plan	\$ 8.44

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

Very truly yours,



Susan E. Parks

cc: Glen Williams

NATIONAL RAILWAY LABOR CONFERENCE EMPLOYEE BENEFITS DEPARTMENT

251 - 18th Street, South, Suite 750, Arlington, VA 22202 --- PHONE: (571) 336-7600

David B. Marcus
Director Employee Benefits
(571) 336-7596
Email: dmarcus@rmrlc.org

Susan E. Parks, CEBS
Benefits Administrator
(571) 336-7625
Email: sparks@rmrlc.org

December 13, 2017

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, 2018 are as follows:

Railroad Employees National Health & Welfare Plan & National Railway Carriers/United Transportation Union H&W Plan Non-Hospital Road	\$1,584.71
Railroad Employees National Early Retirement Major Medical Benefit Plan Non-Hospital Road	\$ 135.96
Aetna - National Dental Plan	\$ 63.67
Aetna - Supplemental Sickness Plans	
ShopCrafts	\$ 75.48
Signalmen	\$ 44.34
Maintenance of Way	\$ 51.63
Trustmark - Supplemental Sickness Plans Yardmasters	\$ 34.22
EyeMed - National Vision Plan	\$ 8.44

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

Very truly yours,



Susan E. Parks

cc: Glen Williams

RCAF Taxable Wages

(To Use for Railroad Retirement and Unemployment Insurance Payroll Tax Calculations)

In the RCAF calculation, Total Wages are the wages paid, while Taxable Wages are the wages on which to base payroll tax calculations. The difference is caused by pre-tax employee contributions to help pay Health & Welfare costs. This page calculates that wage rate difference.

The national agreements feature employee Health & Welfare cost sharing. Some of the independent agreements adopt the dollar amount contributed under the national agreement, and some have their own employee contribution rate. This Cost Sharing is a pre-tax employee contribution to Health & Welfare insurance premiums paid by the employer. The employee contribution reduces employer Health & Welfare costs, while the Health & Welfare insurance premiums paid to the provider are unchanged. In the RCAF calculation, the reduction to the employer's Health & Welfare costs affect the Supplements portion of the Labor component of the index. The Taxable Wage Rate is used for Railroad Retirement and Unemployment Insurance calculations.

Reduction Calculation for 4Q/2018

U.S. ST Hours =

287,199,489

Wage Statistics are for 2017

Union Group	Employees	Mo. Rate	Annual \$
National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,712	(\$228.89)	(\$4,702,316.16)
National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	23,736	(\$228.89)	(\$65,195,196.48)
National BMW (All except SOO, DME, DH)	22,484	(\$228.89)	(\$61,756,353.12)
National BRS (All except DME)	7,429	(\$228.89)	(\$20,405,085.72)
National IAM (BNSF, CSX, KCS, NS, SOO, UP)	6,402	(\$228.89)	(\$17,584,245.36)
National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	836	(\$228.89)	(\$2,296,224.48)
National IBEW (All except DME)	5,550	(\$228.89)	(\$15,244,074.00)
National NCFO (All except DME and WC)	2,322	(\$228.89)	(\$6,377,790.96)
National SMW (BNSF, CSX, KCS, NS, UP, IC)	906	(\$228.89)	(\$2,488,492.08)
National TCU (All except DME and DH)	5,043	(\$228.89)	(\$13,851,507.24)
National TCU-CAR (All except DME)	8,861	(\$228.89)	(\$24,338,331.48)
National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	34,615	(\$228.89)	(\$95,076,328.20)
Yardmasters (BNSF, CSX, KCS, NS, UP, SOO, DH)	1,609	(\$228.89)	(\$4,419,408.12)
Misc Indep (DME, portions of DH & SOO, portions of CN)	3,696	(\$237.13)	(\$10,517,277.24)
Total Union	125,201		(\$344,252,630.64)
All Other @ \$3,918,543.88 total per month			(\$47,022,526.56)
Total			(\$391,275,157.20)

Reduction in Wage Rate Per ST Hour

-\$1.36238111

Deduct this amount from the Wage Rate

-\$1.362

Railroad Retirement and Medicare for RCAF

Inputs:

RRB Earnings Distribution Year 2016
 Wage Statistics Year 2017
 Current Year 2018
 Employees Receiving Pay* 150,320

* from 2017 final wage statistics

Tier I Maximum Taxable Earnings for 2018 128,700
 Tier II Maximum Taxable Earnings for 2018 95,400
 Medicare Maximum Taxable Earnings for 2018 no limit
 Tier I Employer Tax Rate for 2018 6.20%
 Tier II Employer Tax Rate for 2018 13.10%
 Medicare Employer Tax Rate for 2018 1.45%

USA RCAF	Wage Rate	Update Factor	Railroad Retirement Tax	Hourly Rate	
2016	\$39.231				
2017	\$39.599	1.00938	\$607,976,250	\$8.514	hourly rate from SUPPL2016.xlsx
1Q/2018	\$41.039	1.04609	\$626,030,614	\$8.767	Rate = Taxable Rate
2Q/2018	\$41.447	1.05649	\$630,686,130	\$8.832	
3Q/2018	\$42.946	1.09470	\$647,285,465	\$9.064	
4Q/2018	\$42.976	1.09546	\$647,605,361	\$9.069	

Railroad Retirement & Medicare, U.S.

From 2016 Earnings Distribution			1Q/2018 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info									
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtlly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)			
									Tier I	Tier II	Medicare	
\$0 - 41,699	\$30,262	2.166 %	3,256	\$31,657	\$7,914	\$7,914	\$7,914	\$7,914	\$25,767,972	\$25,767,972	\$25,767,972	\$25,767,972
41,700 - 43,699	\$42,903	0.591	888	44,880	11,220	11,220	11,220	11,220	9,967,800	9,967,800	9,967,800	9,967,800
43,700 - 45,699	\$44,763	0.935	1,405	46,826	11,706	11,706	11,706	11,706	16,453,374	16,453,374	16,453,374	16,453,374
45,700 - 47,699	\$46,647	1.379	2,073	48,797	12,199	12,199	12,199	12,199	25,287,864	25,287,864	25,287,864	25,287,864
47,700 - 49,699	\$48,750	1.034	1,554	50,997	12,749	12,749	12,749	12,749	19,816,152	19,816,152	19,816,152	19,816,152
49,700 - 51,699	\$50,730	2.068	3,109	53,068	13,267	13,267	13,267	13,267	41,241,985	41,241,985	41,241,985	41,241,985
51,700 - 53,699	\$52,751	1.379	2,073	55,182	13,796	13,796	13,796	13,796	28,596,911	28,596,911	28,596,911	28,596,911
53,700 - 55,699	\$54,804	1.723	2,590	57,330	14,332	14,332	14,332	14,332	37,121,174	37,121,174	37,121,174	37,121,174
55,700 - 57,699	\$56,791	2.806	4,218	59,408	14,852	14,852	14,852	14,852	62,645,712	62,645,712	62,645,712	62,645,712
57,700 - 59,699	\$58,815	3.299	4,959	61,526	15,381	15,381	15,381	15,381	76,277,172	76,277,172	76,277,172	76,277,172
59,700 - 61,699	\$60,675	4.628	6,957	63,471	15,868	15,868	15,868	15,868	110,389,382	110,389,382	110,389,382	110,389,382
61,700 - 63,699	\$62,661	4.628	6,957	65,549	16,387	16,387	16,387	16,387	114,002,622	114,002,622	114,002,622	114,002,622
63,700 - 65,699	\$64,649	4.825	7,253	67,628	16,907	16,907	16,907	16,907	122,626,207	122,626,207	122,626,207	122,626,207
65,700 - 67,699	\$66,673	4.530	6,809	69,746	17,436	17,436	17,436	17,436	118,733,253	118,733,253	118,733,253	118,733,253
67,700 - 69,699	\$68,534	3.447	5,182	71,692	17,923	17,923	17,923	17,923	92,869,163	92,869,163	92,869,163	92,869,163
69,700 - 71,699	\$70,724	3.988	5,995	73,983	18,496	18,496	18,496	18,496	110,878,191	110,878,191	110,878,191	110,878,191
71,700 - 73,699	\$72,852	2.905	4,367	76,209	19,052	19,052	19,052	19,052	83,197,789	83,197,789	83,197,789	83,197,789
73,700 - 75,699	\$74,718	2.462	3,701	78,161	19,540	19,540	19,540	19,540	72,316,509	72,316,509	72,316,509	72,316,509
75,700 - 77,699	\$76,600	3.644	5,478	80,130	20,033	20,033	20,033	20,033	109,731,497	109,731,497	109,731,497	109,731,497
77,700 - 79,699	\$78,723	3.151	4,737	82,351	20,588	20,588	20,588	20,588	97,515,624	97,515,624	97,515,624	97,515,624
79,700 - 81,699	\$80,708	3.299	4,959	84,428	21,107	21,107	21,107	21,107	104,670,203	104,670,203	104,670,203	104,670,203
81,700 - 83,699	\$82,622	2.757	4,144	86,430	21,607	21,607	21,607	21,607	89,548,154	89,548,154	89,548,154	89,548,154
83,700 - 85,699	\$84,690	2.314	3,478	88,593	22,148	22,148	22,148	22,148	77,040,600	77,040,600	77,040,600	77,040,600
85,700 - 87,699	\$86,732	2.905	4,367	90,729	22,682	22,682	22,682	22,682	99,048,902	99,048,902	99,048,902	99,048,902
87,700 - 89,699	\$88,666	3.348	5,033	92,752	23,188	23,188	23,188	23,188	116,698,892	116,698,892	116,698,892	116,698,892
89,700 - 91,699	\$90,699	2.708	4,071	94,879	23,720	23,720	23,720	23,720	96,555,124	96,555,124	96,555,124	96,555,124
91,700 - 93,699	\$92,738	1.526	2,294	97,012	24,253	24,253	23,850	24,253	55,633,506	54,709,114	55,633,506	55,633,506
93,700 - 95,699	\$94,689	1.822	2,739	99,053	24,763	24,763	23,850	24,763	67,822,231	65,321,105	67,822,231	67,822,231
95,700 - 97,699	\$96,618	1.428	2,147	101,071	25,268	25,268	23,850	25,268	54,238,843	51,195,685	54,238,843	54,238,843
97,700 - 99,699	\$98,600	1.822	2,739	103,144	25,786	25,786	23,850	25,786	70,623,535	65,321,105	70,623,535	70,623,535
99,700 - 101,699	\$100,896	1.871	2,812	105,546	26,386	26,386	23,850	26,386	74,211,619	67,077,820	74,211,619	74,211,619
101,700 - 103,699	\$102,684	1.526	2,294	107,416	26,854	26,854	23,850	26,854	61,600,109	54,709,114	61,600,109	61,600,109
103,700 - 105,699	\$104,566	1.231	1,850	109,385	27,346	27,346	23,850	27,346	50,602,586	44,132,975	50,602,586	50,602,586
105,700 - 107,699	\$106,714	1.625	2,443	111,632	27,908	27,908	23,850	27,908	68,170,885	58,258,395	68,170,885	68,170,885
107,700 - 109,699	\$108,748	1.329	1,998	113,760	28,440	28,440	23,850	28,440	56,815,970	47,646,404	56,815,970	56,815,970
109,700 - 111,699	\$110,767	0.788	1,185	115,872	28,968	28,968	23,850	28,968	34,313,165	28,250,840	34,313,165	34,313,165
111,700 - 113,699	\$112,607	0.886	1,332	117,797	29,449	29,449	23,850	29,449	39,221,417	31,764,270	39,221,417	39,221,417
113,700 - 115,699	\$114,747	1.034	1,554	120,035	30,009	30,009	23,850	30,009	46,642,954	37,070,265	46,642,954	46,642,954
\$115,700 - over	\$168,229	10.193	15,322	175,982	43,996	32,175	23,850	43,996	<u>492,989,134</u>	<u>365,432,505</u>	<u>674,104,234</u>	<u>674,104,234</u>
TOTAL	\$84,275	100.000	150,320									
Total Taxable Earnings									3,131,884,182	2,929,887,826	3,312,999,282	
Employer Tax Rate									6.20%	13.10%	1.45%	
Quarterly Payment									\$194,176,819	\$383,815,305	\$48,038,490	

Total Tier I, Tier II, and Medicare Paid this Quarter

\$626,030,614

Railroad Retirement & Medicare, U.S.

From 2016 Earnings Distribution			2Q/2018 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info									
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtlly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)			
									Tier I	Tier II	Medicare	
\$0 - 41,699	\$30,262	2.166 %	3,256	\$31,971	\$7,993	\$7,993	\$7,993	\$7,993	\$26,024,151	\$26,024,151	\$26,024,151	\$26,024,151
41,700 - 43,699	\$42,903	0.591	888	45,326	11,332	11,332	11,332	11,332	10,066,897	10,066,897	10,066,897	10,066,897
43,700 - 45,699	\$44,763	0.935	1,405	47,291	11,823	11,823	11,823	11,823	16,616,949	16,616,949	16,616,949	16,616,949
45,700 - 47,699	\$46,647	1.379	2,073	49,282	12,320	12,320	12,320	12,320	25,539,270	25,539,270	25,539,270	25,539,270
47,700 - 49,699	\$48,750	1.034	1,554	51,504	12,876	12,876	12,876	12,876	20,013,160	20,013,160	20,013,160	20,013,160
49,700 - 51,699	\$50,730	2.068	3,109	53,596	13,399	13,399	13,399	13,399	41,652,003	41,652,003	41,652,003	41,652,003
51,700 - 53,699	\$52,751	1.379	2,073	55,731	13,933	13,933	13,933	13,933	28,881,215	28,881,215	28,881,215	28,881,215
53,700 - 55,699	\$54,804	1.723	2,590	57,900	14,475	14,475	14,475	14,475	37,490,224	37,490,224	37,490,224	37,490,224
55,700 - 57,699	\$56,791	2.806	4,218	59,999	15,000	15,000	15,000	15,000	63,268,521	63,268,521	63,268,521	63,268,521
57,700 - 59,699	\$58,815	3.299	4,959	62,137	15,534	15,534	15,534	15,534	77,035,502	77,035,502	77,035,502	77,035,502
59,700 - 61,699	\$60,675	4.628	6,957	64,102	16,026	16,026	16,026	16,026	111,486,847	111,486,847	111,486,847	111,486,847
61,700 - 63,699	\$62,661	4.628	6,957	66,200	16,550	16,550	16,550	16,550	115,136,009	115,136,009	115,136,009	115,136,009
63,700 - 65,699	\$64,649	4.825	7,253	68,301	17,075	17,075	17,075	17,075	123,845,328	123,845,328	123,845,328	123,845,328
65,700 - 67,699	\$66,673	4.530	6,809	70,439	17,610	17,610	17,610	17,610	119,913,671	119,913,671	119,913,671	119,913,671
67,700 - 69,699	\$68,534	3.447	5,182	72,405	18,101	18,101	18,101	18,101	93,792,446	93,792,446	93,792,446	93,792,446
69,700 - 71,699	\$70,724	3.988	5,995	74,719	18,680	18,680	18,680	18,680	111,980,516	111,980,516	111,980,516	111,980,516
71,700 - 73,699	\$72,852	2.905	4,367	76,967	19,242	19,242	19,242	19,242	84,024,921	84,024,921	84,024,921	84,024,921
73,700 - 75,699	\$74,718	2.462	3,701	78,939	19,735	19,735	19,735	19,735	73,035,463	73,035,463	73,035,463	73,035,463
75,700 - 77,699	\$76,600	3.644	5,478	80,927	20,232	20,232	20,232	20,232	110,822,422	110,822,422	110,822,422	110,822,422
77,700 - 79,699	\$78,723	3.151	4,737	83,170	20,792	20,792	20,792	20,792	98,485,102	98,485,102	98,485,102	98,485,102
79,700 - 81,699	\$80,708	3.299	4,959	85,267	21,317	21,317	21,317	21,317	105,710,810	105,710,810	105,710,810	105,710,810
81,700 - 83,699	\$82,622	2.757	4,144	87,289	21,822	21,822	21,822	21,822	90,438,420	90,438,420	90,438,420	90,438,420
83,700 - 85,699	\$84,690	2.314	3,478	89,474	22,368	22,368	22,368	22,368	77,806,519	77,806,519	77,806,519	77,806,519
85,700 - 87,699	\$86,732	2.905	4,367	91,631	22,908	22,908	22,908	22,908	100,033,623	100,033,623	100,033,623	100,033,623
87,700 - 89,699	\$88,666	3.348	5,033	93,674	23,419	23,419	23,419	23,419	117,859,085	117,859,085	117,859,085	117,859,085
89,700 - 91,699	\$90,699	2.708	4,071	95,822	23,956	23,956	23,956	23,956	97,515,052	97,515,052	97,515,052	97,515,052
91,700 - 93,699	\$92,738	1.526	2,294	97,976	24,494	24,494	23,850	24,494	56,186,601	54,709,114	56,186,601	56,186,601
93,700 - 95,699	\$94,689	1.822	2,739	100,038	25,009	25,009	23,850	25,009	68,496,503	65,321,105	68,496,503	68,496,503
95,700 - 97,699	\$96,618	1.428	2,147	102,076	25,519	25,519	23,850	25,519	54,778,073	51,195,685	54,778,073	54,778,073
97,700 - 99,699	\$98,600	1.822	2,739	104,170	26,042	26,042	23,850	26,042	71,325,658	65,321,105	71,325,658	71,325,658
99,700 - 101,699	\$100,896	1.871	2,812	106,595	26,649	26,649	23,850	26,649	74,949,413	67,077,820	74,949,413	74,949,413
101,700 - 103,699	\$102,684	1.526	2,294	108,484	27,121	27,121	23,850	27,121	62,212,522	54,709,114	62,212,522	62,212,522
103,700 - 105,699	\$104,566	1.231	1,850	110,473	27,618	27,618	23,850	27,618	51,105,665	44,132,975	51,105,665	51,105,665
105,700 - 107,699	\$106,714	1.625	2,443	112,742	28,185	28,185	23,850	28,185	68,848,624	58,258,395	68,848,624	68,848,624
107,700 - 109,699	\$108,748	1.329	1,998	114,891	28,723	28,723	23,850	28,723	57,380,821	47,646,404	57,380,821	57,380,821
109,700 - 111,699	\$110,767	0.788	1,185	117,024	29,256	29,256	23,850	29,256	34,654,298	28,250,840	34,654,298	34,654,298
111,700 - 113,699	\$112,607	0.886	1,332	118,968	29,742	29,742	23,850	29,742	39,611,347	31,764,270	39,611,347	39,611,347
113,700 - 115,699	\$114,747	1.034	1,554	121,229	30,307	30,307	23,850	30,307	47,106,667	37,070,265	47,106,667	47,106,667
\$115,700 - over	\$168,229	10.193	15,322	177,732	44,433	32,175	23,850	44,433	492,989,134	365,432,505	680,806,018	680,806,018
TOTAL		100.000	150,320						Total Taxable Earnings	3,158,119,451	2,949,363,722	3,345,936,335
									Employer Tax Rate	6.20%	13.10%	1.45%
									Quarterly Payment	\$195,803,406	\$386,366,648	\$48,516,077

Total Tier I, Tier II, and Medicare Paid this Quarter

\$630,686,130

Railroad Retirement & Medicare, U.S.

From 2016 Earnings Distribution			3Q/2018 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info									
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtlly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)			
									Tier I	Tier II	Medicare	
\$0 - 41,699	\$30,262	2.166 %	3,256	\$33,128	\$8,282	\$8,282	\$8,282	\$8,282	\$26,965,358	\$26,965,358	\$26,965,358	\$26,965,358
41,700 - 43,699	\$42,903	0.591	888	46,966	11,741	11,741	11,741	11,741	10,430,984	10,430,984	10,430,984	10,430,984
43,700 - 45,699	\$44,763	0.935	1,405	49,002	12,250	12,250	12,250	12,250	17,217,929	17,217,929	17,217,929	17,217,929
45,700 - 47,699	\$46,647	1.379	2,073	51,064	12,766	12,766	12,766	12,766	26,462,941	26,462,941	26,462,941	26,462,941
47,700 - 49,699	\$48,750	1.034	1,554	53,366	13,342	13,342	13,342	13,342	20,736,969	20,736,969	20,736,969	20,736,969
49,700 - 51,699	\$50,730	2.068	3,109	55,534	13,883	13,883	13,883	13,883	43,158,418	43,158,418	43,158,418	43,158,418
51,700 - 53,699	\$52,751	1.379	2,073	57,746	14,437	14,437	14,437	14,437	29,925,753	29,925,753	29,925,753	29,925,753
53,700 - 55,699	\$54,804	1.723	2,590	59,994	14,998	14,998	14,998	14,998	38,846,120	38,846,120	38,846,120	38,846,120
55,700 - 57,699	\$56,791	2.806	4,218	62,169	15,542	15,542	15,542	15,542	65,556,733	65,556,733	65,556,733	65,556,733
57,700 - 59,699	\$58,815	3.299	4,959	64,385	16,096	16,096	16,096	16,096	79,821,619	79,821,619	79,821,619	79,821,619
59,700 - 61,699	\$60,675	4.628	6,957	66,421	16,605	16,605	16,605	16,605	115,518,955	115,518,955	115,518,955	115,518,955
61,700 - 63,699	\$62,661	4.628	6,957	68,595	17,149	17,149	17,149	17,149	119,300,095	119,300,095	119,300,095	119,300,095
63,700 - 65,699	\$64,649	4.825	7,253	70,771	17,693	17,693	17,693	17,693	128,324,401	128,324,401	128,324,401	128,324,401
65,700 - 67,699	\$66,673	4.530	6,809	72,987	18,247	18,247	18,247	18,247	124,250,549	124,250,549	124,250,549	124,250,549
67,700 - 69,699	\$68,534	3.447	5,182	75,024	18,756	18,756	18,756	18,756	97,184,607	97,184,607	97,184,607	97,184,607
69,700 - 71,699	\$70,724	3.988	5,995	77,421	19,355	19,355	19,355	19,355	116,030,478	116,030,478	116,030,478	116,030,478
71,700 - 73,699	\$72,852	2.905	4,367	79,751	19,938	19,938	19,938	19,938	87,063,823	87,063,823	87,063,823	87,063,823
73,700 - 75,699	\$74,718	2.462	3,701	81,793	20,448	20,448	20,448	20,448	75,676,912	75,676,912	75,676,912	75,676,912
75,700 - 77,699	\$76,600	3.644	5,478	83,854	20,963	20,963	20,963	20,963	114,830,500	114,830,500	114,830,500	114,830,500
77,700 - 79,699	\$78,723	3.151	4,737	86,178	21,544	21,544	21,544	21,544	102,046,980	102,046,980	102,046,980	102,046,980
79,700 - 81,699	\$80,708	3.299	4,959	88,351	22,088	22,088	22,088	22,088	109,534,018	109,534,018	109,534,018	109,534,018
81,700 - 83,699	\$82,622	2.757	4,144	90,446	22,611	22,611	22,611	22,611	93,709,277	93,709,277	93,709,277	93,709,277
83,700 - 85,699	\$84,690	2.314	3,478	92,710	23,177	23,177	23,177	23,177	80,620,522	80,620,522	80,620,522	80,620,522
85,700 - 87,699	\$86,732	2.905	4,367	94,945	23,736	23,736	23,736	23,736	103,651,506	103,651,506	103,651,506	103,651,506
87,700 - 89,699	\$88,666	3.348	5,033	97,062	24,266	24,266	24,266	24,266	122,121,655	122,121,655	122,121,655	122,121,655
89,700 - 91,699	\$90,699	2.708	4,071	99,288	24,822	24,822	23,875	24,822	101,041,847	97,185,948	101,041,847	101,041,847
91,700 - 93,699	\$92,738	1.526	2,294	101,520	25,380	25,380	23,850	25,380	58,218,683	54,709,114	58,218,683	58,218,683
93,700 - 95,699	\$94,689	1.822	2,739	103,656	25,914	25,914	23,850	25,914	70,973,794	65,321,105	70,973,794	70,973,794
95,700 - 97,699	\$96,618	1.428	2,147	105,767	26,442	26,442	23,850	26,442	56,759,213	51,195,685	56,759,213	56,759,213
97,700 - 99,699	\$98,600	1.822	2,739	107,937	26,984	26,984	23,850	26,984	73,905,269	65,321,105	73,905,269	73,905,269
99,700 - 101,699	\$100,896	1.871	2,812	110,450	27,613	27,613	23,850	27,613	77,660,084	67,077,820	77,660,084	77,660,084
101,700 - 103,699	\$102,684	1.526	2,294	112,408	28,102	28,102	23,850	28,102	64,462,542	54,709,114	64,462,542	64,462,542
103,700 - 105,699	\$104,566	1.231	1,850	114,468	28,617	28,617	23,850	28,617	52,953,987	44,132,975	52,953,987	52,953,987
105,700 - 107,699	\$106,714	1.625	2,443	116,819	29,205	29,205	23,850	29,205	71,338,649	58,258,395	71,338,649	71,338,649
107,700 - 109,699	\$108,748	1.329	1,998	119,046	29,761	29,761	23,850	29,761	59,456,094	47,646,404	59,456,094	59,456,094
109,700 - 111,699	\$110,767	0.788	1,185	121,256	30,314	30,314	23,850	30,314	35,907,629	28,250,840	35,907,629	35,907,629
111,700 - 113,699	\$112,607	0.886	1,332	123,270	30,818	30,818	23,850	30,818	41,043,957	31,764,270	41,043,957	41,043,957
113,700 - 115,699	\$114,747	1.034	1,554	125,613	31,403	31,403	23,850	31,403	48,810,358	37,070,265	48,810,358	48,810,358
\$115,700 - over	\$168,229	10.193	15,322	184,160	46,040	32,175	23,850	46,040	<u>492,989,134</u>	<u>365,432,505</u>	<u>705,428,505</u>	<u>705,428,505</u>
TOTAL		100.000	150,320						Total Taxable Earnings	3,254,508,341	3,017,062,645	3,466,947,712
									Employer Tax Rate	6.20%	13.10%	1.45%
									Quarterly Payment	\$201,779,517	\$395,235,206	\$50,270,742

Total Tier I, Tier II, and Medicare Paid this Quarter

\$647,285,465

Railroad Retirement & Medicare, U.S.

From 2016 Earnings Distribution			4Q/2018 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info									
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtlly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)			
									Tier I	Tier II	Medicare	
\$0 - 41,699	\$30,262	2.166	3,256	\$33,151	\$8,288	\$8,288	\$8,288	\$8,288	\$26,984,195	\$26,984,195	\$26,984,195	
41,700 - 43,699	\$42,903	0.591	888	46,999	11,750	11,750	11,750	11,750	10,438,270	10,438,270	10,438,270	
43,700 - 45,699	\$44,763	0.935	1,405	49,036	12,259	12,259	12,259	12,259	17,229,957	17,229,957	17,229,957	
45,700 - 47,699	\$46,647	1.379	2,073	51,100	12,775	12,775	12,775	12,775	26,481,426	26,481,426	26,481,426	
47,700 - 49,699	\$48,750	1.034	1,554	53,404	13,351	13,351	13,351	13,351	20,751,455	20,751,455	20,751,455	
49,700 - 51,699	\$50,730	2.068	3,109	55,573	13,893	13,893	13,893	13,893	43,188,566	43,188,566	43,188,566	
51,700 - 53,699	\$52,751	1.379	2,073	57,787	14,447	14,447	14,447	14,447	29,946,657	29,946,657	29,946,657	
53,700 - 55,699	\$54,804	1.723	2,590	60,036	15,009	15,009	15,009	15,009	38,873,256	38,873,256	38,873,256	
55,700 - 57,699	\$56,791	2.806	4,218	62,212	15,553	15,553	15,553	15,553	65,602,527	65,602,527	65,602,527	
57,700 - 59,699	\$58,815	3.299	4,959	64,429	16,107	16,107	16,107	16,107	79,877,379	79,877,379	79,877,379	
59,700 - 61,699	\$60,675	4.628	6,957	66,467	16,617	16,617	16,617	16,617	115,599,651	115,599,651	115,599,651	
61,700 - 63,699	\$62,661	4.628	6,957	68,643	17,161	17,161	17,161	17,161	119,383,432	119,383,432	119,383,432	
63,700 - 65,699	\$64,649	4.825	7,253	70,820	17,705	17,705	17,705	17,705	128,414,042	128,414,042	128,414,042	
65,700 - 67,699	\$66,673	4.530	6,809	73,038	18,259	18,259	18,259	18,259	124,337,344	124,337,344	124,337,344	
67,700 - 69,699	\$68,534	3.447	5,182	75,076	18,769	18,769	18,769	18,769	97,252,495	97,252,495	97,252,495	
69,700 - 71,699	\$70,724	3.988	5,995	77,475	19,369	19,369	19,369	19,369	116,111,532	116,111,532	116,111,532	
71,700 - 73,699	\$72,852	2.905	4,367	79,806	19,952	19,952	19,952	19,952	87,124,641	87,124,641	87,124,641	
73,700 - 75,699	\$74,718	2.462	3,701	81,851	20,463	20,463	20,463	20,463	75,729,777	75,729,777	75,729,777	
75,700 - 77,699	\$76,600	3.644	5,478	83,912	20,978	20,978	20,978	20,978	114,910,715	114,910,715	114,910,715	
77,700 - 79,699	\$78,723	3.151	4,737	86,238	21,559	21,559	21,559	21,559	102,118,265	102,118,265	102,118,265	
79,700 - 81,699	\$80,708	3.299	4,959	88,412	22,103	22,103	22,103	22,103	109,610,533	109,610,533	109,610,533	
81,700 - 83,699	\$82,622	2.757	4,144	90,509	22,627	22,627	22,627	22,627	93,774,738	93,774,738	93,774,738	
83,700 - 85,699	\$84,690	2.314	3,478	92,775	23,194	23,194	23,194	23,194	80,676,839	80,676,839	80,676,839	
85,700 - 87,699	\$86,732	2.905	4,367	95,011	23,753	23,753	23,753	23,753	103,723,912	103,723,912	103,723,912	
87,700 - 89,699	\$88,666	3.348	5,033	97,130	24,283	24,283	24,283	24,283	122,206,964	122,206,964	122,206,964	
89,700 - 91,699	\$90,699	2.708	4,071	99,357	24,839	24,839	23,850	24,839	101,112,430	97,085,375	101,112,430	
91,700 - 93,699	\$92,738	1.526	2,294	101,591	25,398	25,398	23,850	25,398	58,259,352	54,709,114	58,259,352	
93,700 - 95,699	\$94,689	1.822	2,739	103,728	25,932	25,932	23,850	25,932	71,023,373	65,321,105	71,023,373	
95,700 - 97,699	\$96,618	1.428	2,147	105,841	26,460	26,460	23,850	26,460	56,798,863	51,195,685	56,798,863	
97,700 - 99,699	\$98,600	1.822	2,739	108,012	27,003	27,003	23,850	27,003	73,956,896	65,321,105	73,956,896	
99,700 - 101,699	\$100,896	1.871	2,812	110,528	27,632	27,632	23,850	27,632	77,714,333	67,077,820	77,714,333	
101,700 - 103,699	\$102,684	1.526	2,294	112,486	28,122	28,122	23,850	28,122	64,507,573	54,709,114	64,507,573	
103,700 - 105,699	\$104,566	1.231	1,850	114,548	28,637	28,637	23,850	28,637	52,990,978	44,132,975	52,990,978	
105,700 - 107,699	\$106,714	1.625	2,443	116,901	29,225	29,225	23,850	29,225	71,388,483	58,258,395	71,388,483	
107,700 - 109,699	\$108,748	1.329	1,998	119,129	29,782	29,782	23,850	29,782	59,497,627	47,646,404	59,497,627	
109,700 - 111,699	\$110,767	0.788	1,185	121,341	30,335	30,335	23,850	30,335	35,932,712	28,250,840	35,932,712	
111,700 - 113,699	\$112,607	0.886	1,332	123,356	30,839	30,839	23,850	30,839	41,072,629	31,764,270	41,072,629	
113,700 - 115,699	\$114,747	1.034	1,554	125,701	31,425	31,425	23,850	31,425	48,844,455	37,070,265	48,844,455	
\$115,700 - over	\$168,229	10.193	15,322	184,288	46,072	32,175	23,850	46,072	<u>492,989,134</u>	<u>365,432,505</u>	<u>705,921,283</u>	
TOTAL		100.000	150,320									
Total Taxable Earnings									3,256,437,405	3,018,323,540	3,469,369,554	
Employer Tax Rate									6.20%	13.10%	1.45%	
Quarterly Payment									\$201,899,119	\$395,400,384	\$50,305,859	

Total Tier I, Tier II, and Medicare Paid this Quarter

\$647,605,361

RCAF Unemployment Insurance Tax

	<u>Unemployment Ins.</u>			RRB	Factor	Avg. Ann.	Un. Ins.
	<u>Tax</u>	<u>Earnings</u>	Hourly	Sample	To Update	Taxable	Hourly
	Rate	Base	Earnings	Year	RRB Sample	Earnings	Rate
			\$36.760	(2013)			
2014 Avg.	0.68%	\$17,280	\$38.866		0.999988	\$16,395.26	\$0.059
3Q/15 reb.	2.31%	\$17,460	\$40.503		1.042107	\$16,583.82	\$0.203
4Q/15	2.31%	\$17,460	\$40.590		1.044345	\$16,585.04	\$0.203
1Q/16	2.73%	\$17,460	\$40.888		1.052012	\$16,589.15	\$0.240
2Q/16	2.73%	\$17,460	\$40.731		1.047973	\$16,586.99	\$0.240
3Q/16	2.73%	\$17,460	\$40.545		1.043187	\$16,584.41	\$0.240
			\$38.866	(2014)			
2015 Avg.	2.31%	\$17,460	\$39.887		1.000000	\$16,460.37	\$0.208
3Q/16 reb.	2.73%	\$17,460	\$39.731		0.996089	\$16,458.00	\$0.246
4Q/16	2.73%	\$17,460	\$39.703		0.995387	\$16,457.57	\$0.246
1Q/17	3.37%	\$18,540	\$39.736		0.996214	\$17,436.31	\$0.321
2Q/17	3.37%	\$18,540	\$39.738		0.996264	\$17,436.34	\$0.321
3Q/17	3.37%	\$18,540	\$39.775		0.997192	\$17,436.97	\$0.321
			\$39.887	(2015)			
2016 Avg.	2.73%	\$17,460	\$39.231		1.000000	\$16,664.96	\$0.247
3Q/17 reb.	3.37%	\$18,540	\$39.154		0.998037	\$17,655.72	\$0.323
4Q/17	3.37%	\$18,540	\$39.156		0.998088	\$17,655.75	\$0.323
1Q/18	3.76%	\$18,720	\$40.555		1.033749	\$17,843.78	\$0.364
2Q/18	3.76%	\$18,720	\$40.961		1.044098	\$17,850.31	\$0.364
3Q/18	3.76%	\$18,720	\$42.431		1.081568	\$17,873.30	\$0.365
			\$39.231	(2016)			
2017 Avg.	3.37%	\$18,540	\$39.599		1.009380	\$17,625.49	\$0.319
3Q/18 reb.	3.76%	\$18,720	\$42.946		1.094696	\$17,832.94	\$0.360
4Q/18	3.76%	\$18,720	\$42.976		1.095460	\$17,833.29	\$0.360
1Q/19					0.000000		\$0.000
2Q/19					0.000000		\$0.000
3Q/19					0.000000		\$0.000

Note: Average Annual Taxable Earnings is calculated from the RRB 1% sample data, by multiplying the average annual earnings in the file times the "Factor", and limiting the amount to the earnings base. Thus, the annual hourly earnings used for the calculation of the Factor is for the RRB sample year, and the Factor brings the earnings in the RRB 1% sample file to the current quarter's level.

The MEANS Procedure

Variable	N	Sum	Mean
ANUAL_US	2573	45350374.36	17625.49
QTRLY_US	2573	45885055.41	17833.29

The MEANS Procedure

Variable	N	Sum	Mean
FactorA	2573	2597.13	1.0093800
FactorQ	2573	2818.62	1.0954600
Capa	2573	47703420.00	18540.00
Capq	2573	48166560.00	18720.00

The MEANS Procedure

Variable	N	Sum	Mean
ANUAL_US	2573	45350374.36	17625.49
QTRLY_US	2573	45884152.93	17832.94

The MEANS Procedure

Variable	N	Sum	Mean
FactorA	2573	2597.13	1.0093800
FactorQ	2573	2816.65	1.0946960
Capa	2573	47703420.00	18540.00
Capq	2573	48166560.00	18720.00

PETROLEUM & OTHER LIQUIDS

[OVERVIEW](#)[DATA](#)[ANALYSIS & PROJECTIONS](#)[GLOSSARY](#)[FAQS](#)[SEE ALL PETROLEUM & OTHER LIQUIDS REPORTS](#)

This Week in Petroleum

Release date: August 22, 2018 | Next release date: August 29, 2018

[Download data](#) | [Past Weeks in Petroleum](#) | [Release schedule](#) | [Print](#)

ANALYSIS



CRUDE OIL



GASOLINE



DISTILLATE



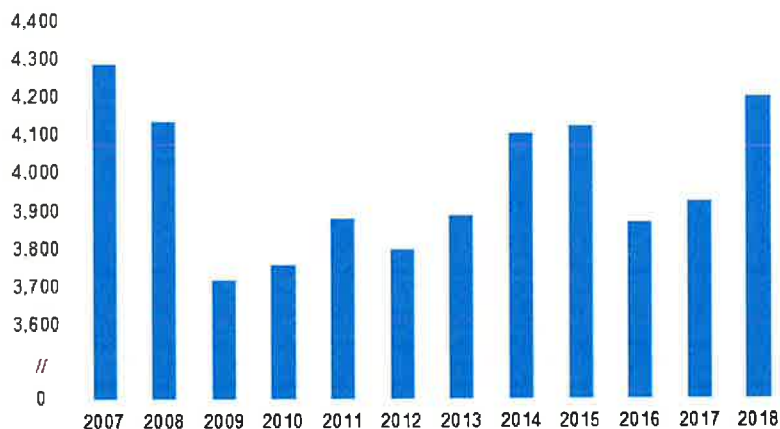
PROPANE

U.S. distillate demand highest since 2007

U.S. demand for distillate fuel oil is at its highest level in more than a decade. During the first five months of 2018, U.S. distillate fuel oil [product supplied](#) (the volume delivered out of the primary supply chain, which is a proxy for demand) averaged 4.2 million barrels per day (b/d), an increase of more than 270,000 b/d from the 2017 level and the highest level since 2007 (Figure 1). This strong U.S. demand is supporting distillate prices, crack spreads, and production. At the same time, U.S. distillate exports are down from record-high levels set in 2017. Despite [record refinery runs](#) and lower exports, distillate inventories in the United States have declined because consumption has outpaced the rate at which inventories have been replenished.

Figure 1. Average U.S. distillate product supplied (January–May)

thousand barrels per day

Source: U.S. Energy Information Administration, *Petroleum Supply Monthly*

In 2018, the January–May average retail diesel fuel price was 51 cents per gallon (gal) higher than the price during the same period in 2017. The price of Brent crude oil also increased during this period, averaging 41 cents/gal higher compared with the level in 2017. The increase in the price of Brent is partly responsible for the diesel price increase. However, the diesel price increased

Retail prices (dollars per gallon)

U.S. regular gasoline prices

dollars per gallon

4.00

3.00

2.00

1.00

Sep Dec Mar Jun Sep

Source: U.S. Energy Information Administration



	Retail prices	Change from last	
	08/20/18	Week	Year
Gasoline	2.821	-0.022↓	0.461↑
Diesel	3.207	-0.010↓	0.611↑

Futures prices (dollars per gallon*)

Crude oil futures price contract 1

dollars per barrel

80

50

20

Sep

Dec

Mar

Jun

Sep

Source: U.S. Energy Information Administration, New York Mercantile Exchange (NYMEX)

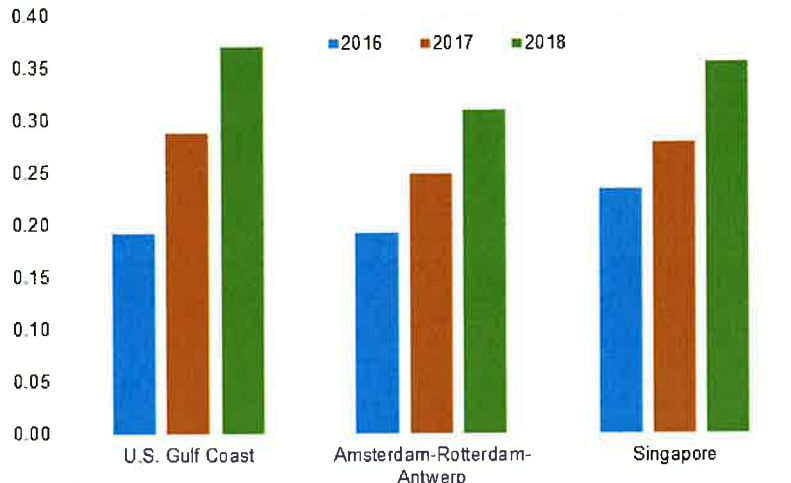


more than the Brent price, resulting in an expanding diesel crack spread (the difference between the cost of crude oil and the price of diesel).

The diesel crack spread on the U.S. Gulf Coast increased from 19 cents/gal during the first five months of 2016 to 37 cents/gal during the first five months of 2018, providing incentives for higher levels of distillate production. Similar trends were seen in other key global refining and distribution hubs (Figure 2), including the [Amsterdam-Rotterdam-Antwerp](#) region (reflecting demand in Northern Europe) and [Singapore](#) (one of Asia's major refining centers and trading hubs).

Figure 2. Diesel crack spreads (January-May)

dollars per gallon



Source: U.S. Energy Information Administration, Bloomberg L.P.

Although gasoline crack spreads tend to exhibit high seasonality, the January–May average on the U.S. Gulf Coast has remained between 23 cents/gal and 27 cents/gal for the past three years. During the same months in 2016, diesel crack spreads on the U.S. Gulf Coast averaged four cents lower than gasoline crack spreads, but they increased during the next two years. In 2017, the average diesel crack spread was more than 1 cent higher than the gasoline crack spread, and in 2018, the difference increased to nearly 11 cents. The strengthening diesel crack spreads likely reflect strong U.S. and global demand for distillate.

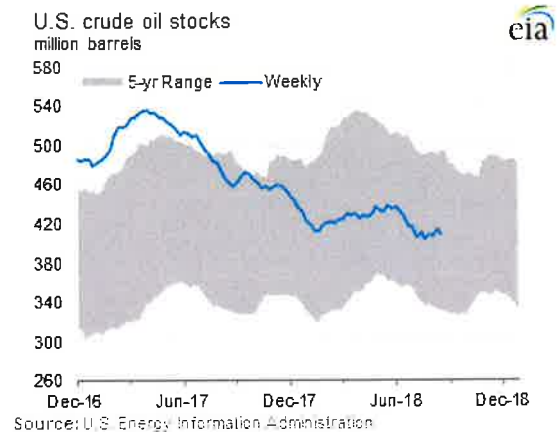
Higher crack spreads provide incentives for refiners to produce distillate. The January–May average net production of distillate fuel oil in the United States set a record high in 2018 at 4.96 million b/d, which was 49,000 b/d higher than net production during the same months in 2017. Strong refinery yields of distillate fuel oil also reflect the higher production levels. Using the 12-month moving average to smooth out the seasonality in refinery yields, May distillate yields were at the highest level since 2015. Export and inventory data indicate that the increased production is being consumed domestically.

Although U.S. distillate exports remain elevated compared with historical data, exports through the first five months of this year are down compared with 2017 levels. Monthly U.S. distillate exports reached a record high in July 2017, and annual exports also set a record high during that year. Exports of distillate for the first five months of 2018 averaged 1.2 million b/d—60,000 b/d lower than 2017 levels but still the second-highest level on record—which could indicate somewhat robust distillate demand outside of the United States. With high U.S.

	Futures prices	Change from last	
	08/17/18	Week	Year
Crude oil	65.91	-1.72 ↓	17.40 ↑
Gasoline	1.981	-0.058 ↓	0.357 ↑
Heating oil	2.098	-0.042 ↓	0.478 ↑

*Note: Crude oil price in dollars per barrel.

Stocks (million barrels)



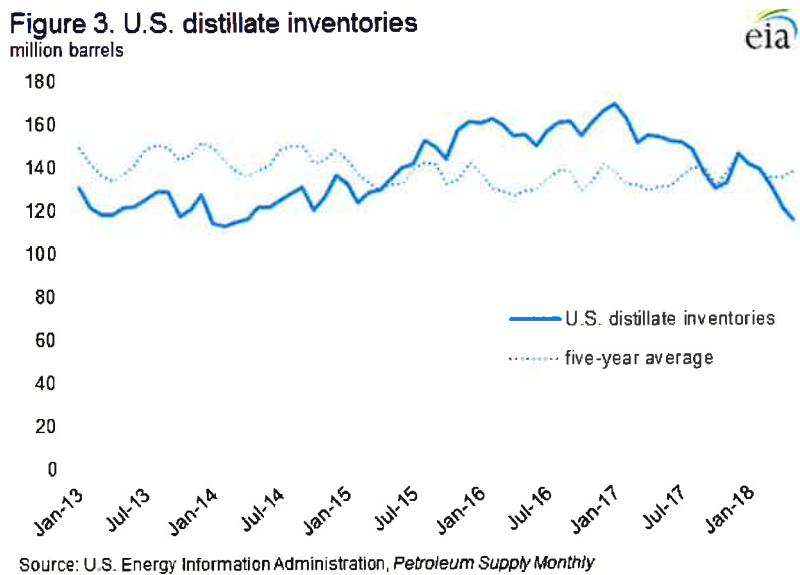
	Stocks	Change from last	
	08/17/18	Week	Year
Crude oil	408.4	-5.8 ↓	-54.8 ↓
Gasoline	234.3	1.2 ↑	4.4 ↑
Distillate	130.8	1.8 ↑	-17.6 ↓
Propane	68.841	-0.941 ↓	-3.332 ↓

[Sign up for email updates](#)

[This Week in Petroleum RSS feed](#)

production and a slight decrease in exports this year, more distillate is available for the U.S. market compared with 2017, but distillate inventories have fallen.

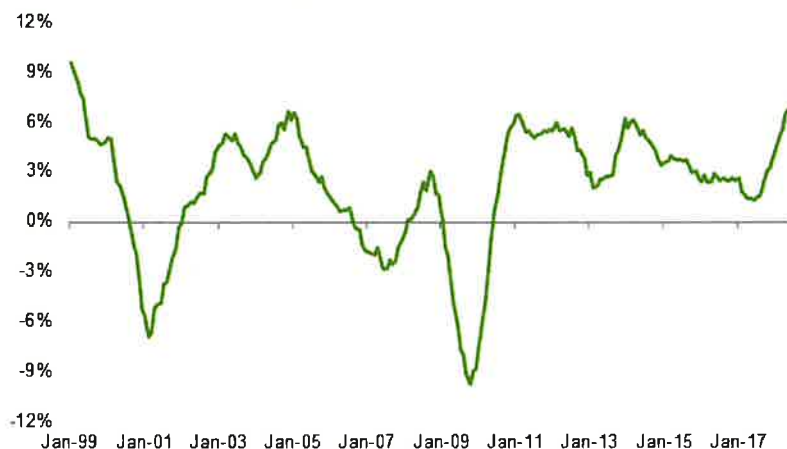
As of May 2018 (the latest month for which data are available), U.S. distillate inventories were 115.2 million barrels, the lowest level for the month of May since 2008 and 22.4 million barrels lower than the five-year (2013–17) average (Figure 3). During the first five months in 2018, distillate inventories have been lower than the five-year average in every month except February. The low inventory levels reflect U.S. consumption increases that have not been fully offset by increased production or lower net exports.



The growth in U.S. distillate consumption is largely attributable to increased trucking activity, which is the largest domestic use for distillate fuel. According to data provided by the American Trucking Association, the 12-month rolling average from June 2017 to May 2018 increased by 6.71%, the highest 12-month average increase since May 1999 (Figure 4). Demand for trucking services tends to be closely correlated with economic growth and industrial activity, both of which have been higher in the first five months of 2018 compared with the same period in 2017.

Figure 4. Truck tonnage index

12-month rolling average growth rate



Source: U.S. Energy Information Administration, American Trucking Association

Industry is also a direct consumer of distillate fuel. The U.S. Energy Information Administration (EIA) creates several industrial indices weighted by specific fuel types to indicate how industrial activity may be affecting demand for those fuels. The distillate-weighted industrial production averaged 111.1 for the first five months of 2018, the highest five-month average since July 2008.

During the winter season, distillate is also used as a heating fuel, primarily in the Northeast. The 2017–18 winter season (EIA defines the winter heating fuel season as October through March), which was markedly colder than the 2016–17 winter season, had 872 heating degree days (the measure of how cold a location is over a period of time relative to a base temperature) compared with 850 heating degree days in the 2016–17 winter. As a result, winter-season demand for distillate in the East Coast (Petroleum Administration for Defense District 1) reached the highest levels since 2014–15.

In contrast to the January 2018 through May 2018 data, estimated weekly data for the past three weeks (from the week ending July 27 through the week ending August 10) indicate a trend of stronger-than-normal distillate stock builds for this time of year. During these weeks, distillate product supplied fell by 338,000 b/d from the January–May average, and refiner and blender net production increased by 288,000 b/d. Distillate exports also fell slightly from its January–May level, increasing available domestic distillate supplies. Despite three consecutive weekly stock builds, distillate inventories as of August 10 were more than 19 million barrels lower than last year's levels at this time and more than 11 million barrels lower than the five-year average. It remains unclear whether these stronger-than-normal stock builds reflect an early onset of seasonal distillate builds in preparation for winter or whether they represent a shift toward slower demand growth.

U.S. average regular gasoline and diesel prices decrease

The U.S. average regular gasoline retail price decreased 2 cents from last week to \$2.82 per gallon on August 20, 2018, up 46 cents from the same time last year. East Coast prices fell nearly three cents to \$2.78 per gallon, West Coast prices decreased over two cents to \$3.31 per gallon, and Midwest and Gulf

Coast prices each fell nearly two cents to \$2.73 per gallon and \$2.57 per gallon, respectively. Rocky Mountain prices increased nearly two cents to \$2.96 per gallon.

The U.S. average diesel fuel price decreased 1 cent from last week to \$3.21 per gallon on August 20, 2018, 61 cents higher than a year ago. East Coast prices fell over one cent to \$3.21 per gallon, Midwest prices decreased one cent to \$3.13 per gallon, Rocky Mountain and Gulf Coast prices each fell nearly one cent to \$3.35 per gallon and \$2.98 per gallon, respectively, and West Coast prices decreased less than one cent, remaining virtually unchanged at \$3.71 per gallon.

Propane/propylene inventories decline

U.S. propane/propylene stocks decreased by 0.9 million barrels last week to 68.8 million barrels as of August 17, 2018, 10.1 million barrels (12.8%) lower than the five-year (2013-2017) average inventory level for this same time of year. Gulf Coast and Rocky Mountain/West Coast inventories decreased by 1.7 million barrels and 0.1 million barrels, respectively, while Midwest and East Coast inventories increased by 0.7 million barrels and 0.2 million barrels, respectively. Propylene non-fuel-use inventories represented 4.5% of total propane/propylene inventories.

For questions about *This Week in Petroleum*, contact the Petroleum Markets Team at 202-586-4522.

Tags: crude oil , gasoline , inventories stocks , prices , STEO (Short-Term Energy Outlook) , weekly

Sources & Uses

- [Petroleum](#)
- [Coal](#)
- [Natural Gas](#)
- [Renewable](#)
- [Nuclear](#)
- [Electricity](#)
- [Consumption](#)
- [Total Energy](#)

Topics

- [Analysis & Projections](#)
- [Environment](#)
- [Markets & Finance](#)
- [Today in Energy](#)

Geography

- [States](#)
- [Countries](#)
- [Maps](#)

Tools

- [A-Z Index](#)
- [All Reports & Publications](#)
- [Data Tools, Apps, and Maps](#)
- [EIA Survey Forms](#)
- [EIA Beta](#)

Policies

- [Privacy/Security](#)
- [Copyright & Reuse](#)
- [Accessibility](#)

Related Sites

- [U.S. Department of Energy](#)
- [USA.gov](#)
- [FedStats](#)

Stay Connected

- [Facebook](#)
- [Twitter](#)
- [Youtube](#)
- [Flickr](#)
- [LinkedIn](#)
- [Email Updates](#)
- [RSS Feeds](#)

U.S.

Summary by Composition Category

	MS-2017		Prev. Idx	2018Q3		Calculation		Relative of Change
	MS Amount	Weight		Cur Idx		Prev. Idx	Cur Idx	
Forest Products	630,135,452	0.1217	310.50	319.04		37.79	38.83	
Metal Products	3,250,749,429	0.6278	176.03	178.99		110.51	112.37	
Misc. Products	1,296,926,484	0.2505	386.28	397.17		96.76	99.49	
Total	5,177,811,365	1.0000	245.06	250.69				1.0230
Total Linked			248.56	254.28				
'77 = 100 Link Fact.=	1.423		353.70	361.84				
'80 = 100 Link Fact.=	1.061		263.72	269.79				

As info only	Change
Forest Products	2.75%
Metal Products	1.68%
Misc. Products	<u>2.82%</u>
Total ('80=100)	2.30%
Rounded 80 Indices	2.3%
Rounded 77 Indices	2.3%

Car Hire for RCAF

Car Hire Index used in RCAF's All-Inclusive Index (Forecast)

	1980	June 3Q/18	Sept. 4Q/18	Dec. 1Q/19	Mar. 2Q/19	June 3Q/19
RATE						
RR-OWNED TIME	31.00	64.00	64.00	--	--	--
RR-OWNED MILEAGE	4.69	6.60	6.70	--	--	--
PRIVATELY-OWNED CARS	25.47	55.51	57.27	--	--	--
AUTORACKS	47.00	84.84	87.00	--	--	--
INDEX						
RR-OWNED TIME	100.0	206.5	206.5	--	--	--
RR-OWNED MILEAGE	100.0	140.7	142.9	--	--	--
PRIVATELY-OWNED CARS	100.0	217.9	224.8	--	--	--
AUTORACKS	100.0	180.5	185.1	--	--	--
CAR HIRE INDEX (old wts) 2016	100.0	209.1	--	--	--	--
CAR HIRE INDEX (new wts) 2017	100.0	211.5	218.0	--	--	--
CAR HIRE INDEX (LINKED)	100.0	210.4	216.9	--	--	--

Note: The Car Hire Index for third quarter using *old weights* and *linked* should match that quarter's filing. The third quarter *new weights* version is used in the fourth quarter linked index calculation to ensure that the transition from old weights to new weights does not impact the linked index.

Note: Indexes are rounded, rates are full float.

Car Hire Data From CHARM

	2018 (first day of month)						2019 (first day of month)							
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Railroad Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	10,741	10,849	10,867											
Rate (in cents)														
Superstructures #3 - Auto Rack	86.0	87.0	87.0											
All other #1 - Time	64.0	64.0	64.0											
All other #2 - Mileage	6.6	6.7	6.7											
Private Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	55,504	55,500	55,392											
Covered Hoppers	421,139	422,430	423,225											
Tank Cars	405,718	405,541	405,949											
Others	291,908	291,714	292,215											
Rate (in cents)														
Superstructures #1 - Time	84.0	84.0	84.0											
Superstructures #2 - Mileage	1.4	1.4	1.4											
Superstructures #3 - Auto Rack	86.0	86.0	87.0											
Covered Hoppers #2 - Mileage	46.2	46.2	46.2											
Tank Cars #2 - Mileage	89.9	90.0	94.6											
Others #1 - Time	89.0	90.0	90.0											
Others #2 - Mileage	8.2	8.2	8.3											
AVERAGE RATES														
Private Superstructures	21.14	21.14	21.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Others	27.96	28.18	28.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Total	55.58	55.66	57.27	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Autoracks	86.00	86.16	87.00	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Car Hire Weights	"Old Wts" New Wts"	
	2016	2017
For RCAF & RCR		
RR-owned Time	0.091	0.004
RR-owned Mileage	0.058	0.053
Privately-owned Cars	0.762	0.883
Autoracks	0.089	0.060
----- Check sum	1.000	1.000

Weights for Equipment Rents		
(not used in Car Hire calculation)		
	2016	2017
Car Hire - U.S.	0.583	0.615
Lease Rentals - U.S.	0.417	0.385
----- Check sum	1.000	1.000

Notes:

The Car Hire Index and Lease Rentals Index are weighed together to calculate the Equipment Rents Index

CHARM is the Car Hire Accounting Rate Master

The 4 bold lines are used for the Car Hire Rate. Private Total uses a weighted average of the Covered Hoppers, Tank Cars, Combined Private Superstructures, and Combined Private Others rates.

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 09/2018

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	10,867	108	0.063	87
Railroad	Number of Zero-Rated Vehicular Flats	74	.	.	.
Railroad	All Other Cars	415,541	64	0.067	.
Railroad	Number of Zero-Rated Other Cars	15,821	.	.	.
Railroad	Total Railroad Equipment	442,303	.	.	.
		.	.	.	.
Private	Vehicular Flats	55,392	84	0.014	87
Private	Number of Zero-Rated Vehicular Flats	140	.	.	.
Private	Covered Hoppers	423,225	0	0.462	.
Private	Number of Zero-Rated Covered Hoppers	13,749	.	.	.
Private	Tanks	405,949	0	0.946	.
Private	Number of Zero-Rated Tanks	8,903	.	.	.
Private	All Other Cars	292,215	90	0.083	.
Private	Number of Zero-Rated Other Cars	26,784	.	.	.
Private	Total Private Equipment	1,226,357	.	.	.

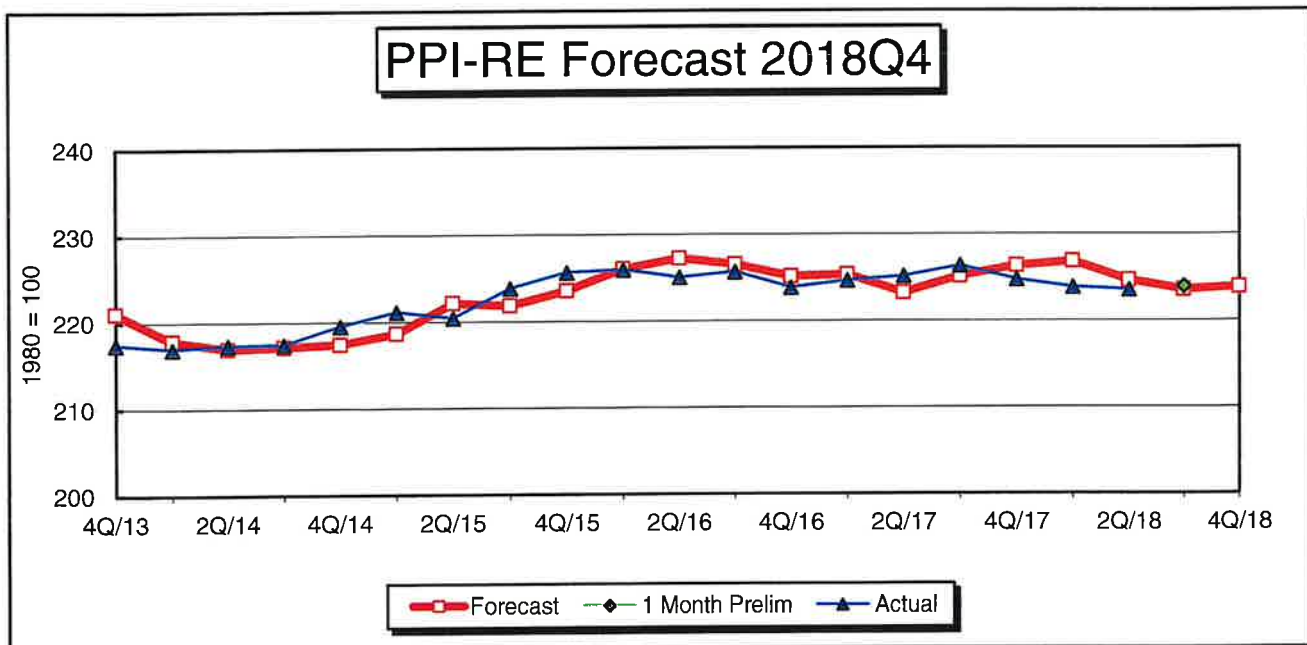
Notes
This report excludes these car types: D (Locomotives), M (MoW, EOTs, etc.), U (Containers), Z (Trailers).
All TTX equipment (including ABOX, RBOX, GONX) is contained in the Private section of report.
Equipment can be zero rated due to owners supplying incorrect or insufficient information to the car accounting process.
Zero-rated equipment includes those with Umler Rate_Indicator of 6 and 0 (zero).
Zero-rated equipment is excluded from the averages shown in this report.
Equipment must be Active in Umler to be included in this report; Pre-registered and Inactive cars are excluded.

PPI-RE Forecast (for Depreciation Component)

	Forecast	Actual	1 Month Prelim
4Q/13	221.0	217.4	
1Q/14	217.8	216.9	
2Q/14	216.9	217.3	
3Q/14	217.1	217.4	
4Q/14	217.4	219.5	
1Q/15	218.6	221.1	
2Q/15	222.1	220.4	
3Q/15	221.8	223.8	
4Q/15	223.5	225.6	
1Q/16	226.0	225.9	
2Q/16	227.2	225.0	
3Q/16	226.5	225.6	
4Q/16	225.1	223.8	
1Q/17	225.3	224.6	
2Q/17	223.2	225.1	
3Q/17	225.1	226.3	
4Q/17	226.3	224.7	
1Q/18	226.8	223.8	
2Q/18	224.6	223.5	
3Q/18	223.5		223.9
4Q/18	223.8		

1980 Base

	PPI-RE Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2018Q4						
Low	199.0	220.1	-2.0%			
Midpoint	202.3	223.8	-0.4%	0.0%	0.1%	0.1%
High	205.6	227.4	1.2%			



Forecast Report for PPIRE

Description: PPIRE

Expert Analysis

Using rule-based logic I have narrowed down the choice to exponential smoothing or Box-Jenkins.
I will perform an out-of-sample test to select between these two approaches.

The cumulative MAD for Exponential smoothing was 1.03 and for Box-Jenkins was 0.98.
The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method.

Based on the lower MAD, I will use Box-Jenkins.

Model Details**Expert selection**

Box-Jenkins

ARIMA(1, 1, 0)

Term	Coefficient	Std. Error	t-Statistic	Significance
a[1]	-0.2452	0.1149	-2.134	0.9637

Within-Sample Statistics

Sample size	72	No. parameters	1
Mean	200.02	Std. deviation	3.71
R-square	0.93	Adj. R-square	0.93
Durbin-Watson	1.94	Ljung-Box(18)	13.4 P=0.24
Forecast error	1	BIC	1.02
MAPE	0.34	SMAPE	0.34
RMSE	0.99	MAD	0.68
MAD/Mean Ratio	0		

Historic Data

Date	Historic
2012-Aug	190.4
2012-Sep	190.9
2012-Oct	194.9
2012-Nov	193.9
2012-Dec	194.1
2013-Jan	196
2013-Feb	195.2
2013-Mar	195.8
2013-Apr	195.2
2013-May	198.1
2013-Jun	196.3
2013-Jul	195.4
2013-Aug	194.5
2013-Sep	194.6
2013-Oct	195.1
2013-Nov	195.2
2013-Dec	196.9
2014-Jan	196

2014-Feb	197.4
2014-Mar	196.8
2014-Apr	196.2
2014-May	196.7
2014-Jun	196.8
2014-Jul	197.8
2014-Aug	197.9
2014-Sep	198.3
2014-Oct	199.3
2014-Nov	199.9
2014-Dec	199.5
2015-Jan	200.8
2015-Feb	200.5
2015-Mar	199.5
2015-Apr	200.5
2015-May	200
2015-Jun	201.4
2015-Jul	201.6
2015-Aug	202.8
2015-Sep	202.8
2015-Oct	204.4
2015-Nov	203.9
2015-Dec	204.5
2016-Jan	204
2016-Feb	204.2
2016-Mar	203.3
2016-Apr	203
2016-May	203.5
2016-Jun	203.5
2016-Jul	203.5
2016-Aug	204.4
2016-Sep	203.7
2016-Oct	203.7
2016-Nov	201.5
2016-Dec	201.8
2017-Jan	201.9
2017-Feb	204.1
2017-Mar	203.3
2017-Apr	203.4
2017-May	203.5
2017-Jun	204.6
2017-Jul	203.6
2017-Aug	204.5
2017-Sep	203.8
2017-Oct	202.8
2017-Nov	201.7
2017-Dec	201.6
2018-Jan	202.1
2018-Feb	202.1
2018-Mar	202
2018-Apr	202
2018-May	202
2018-Jun	202.1
2018-Jul	202.4

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2018-Aug	200.373	202.326	204.279
2018-Sep	199.898	202.344	204.791
2018-Oct	199.421	202.34	205.259
2018-Nov	199.03	202.341	205.652
2018-Dec	198.677	202.341	206.005
2019-Jan	198.355	202.341	206.327
2019-Feb	198.058	202.341	206.624
2019-Mar	197.78	202.341	206.902
2019-Apr	197.517	202.341	207.164
2019-May	197.269	202.341	207.413
2019-Jun	197.032	202.341	207.65
2019-Jul	196.805	202.341	207.877

Databases, Tables & Calculators by Subject

SHARE ON: [f](#) [t](#) [in](#)

Change Output Options:

From: 2017

To: 2018



☐ include graphs ☐ include annual averages

[More Formatting Options](#)

Data extracted on: August 13, 2018 (8:56:59 AM)

PPI Commodity Data

Series Id: WPU144

Not Seasonally Adjusted

Series Title: PPI Commodity data for Transportation equipment-Railroad equipment, not seasonally adjusted

Group: Transportation equipment

Item: Railroad equipment

Base Date: 198200

Download: [xlsx](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	201.9	204.1	203.3	203.4	203.5	204.6	203.6	204.5	203.8	202.8	201.7	201.6
2018	202.1	202.1	202.0	202.0(P)	202.0(P)	202.1(P)	202.4(P)					

P : Preliminary. All indexes are subject to revision four months after original publication.

TOOLS

[Areas at a Glance](#)
[Industries at a Glance](#)
[Economic Releases](#)
[Databases & Tables](#)
[Maps](#)

CALCULATORS

[Inflation](#)
[Injury And Illness](#)

HELP

[Help & Tutorials](#)
[FAQs](#)
[Glossary](#)
[About BLS](#)
[Contact Us](#)

INFO

[What's New](#)
[Careers @ BLS](#)
[Find It! DOL](#)
[Join our Mailing Lists](#)
[Linking & Copyright Info](#)

RESOURCES

[Inspector General \(OIG\)](#)
[Budget and Performance](#)
[No Fear Act](#)
[USA.gov](#)
[Benefits.gov](#)

**Calculation of Interest Rate Index
for RCAF's All-Inclusive Index
(\$000)**

Schedule 210		2017
Line	Item	Col. (b)
42	Total Fixed Charges	\$1,032,334
44	Contingent interest on funded debt	7,772
22	Less: Release of Premiums on funded debt	5,698
Total Interest		\$1,034,408

Schedule 200		(close of year)	(beg. of year)
Line	Item	Col. (b)	Col. (c)
29	Current Liabilities, Loans and Notes Payable	\$100,000	\$100,000
38	Equip. Obs & Other LT Debt due Within One Yr	294,975	349,855
40	Funded Debt Unmatured	2,128,494	1,761,862
41	Equipment Obligations	1,680,253	1,771,531
42	Capitalized Lease Obligations	1,214,668	1,467,790
43	Debt in Default	0	0
44	Accounts Payable: Affiliated Companies	15,631,300	15,741,962
45	Unamortized Debt Premium	-15,783	-5,697
Total Debt		\$21,033,907	\$21,187,303

Total Interest for 2017	\$1,034,408
Average Debt for 2017	\$21,110,605
Embedded Interest Rate for 2017	4.90%
Embedded Interest Rate for 1980	7.85%
Interest Rate Index (1980 = 100)	62.4

Schedule 210 Results of Operations (Income Statement) (\$000) with renumbered lines

5

Class I Railroad U.S. Total

15:25 Tuesday, June 26, 2018

b=current year c=preceding year d=freight-related e=passenger related

Obs	Year	Sched	Line No	label	colb	colc	cold	cole	Line No
32	2017	210	32	Maint of invest organiz	0	0	0	0	32
33	2017	210	33	Income xfrd contracts	0	0	0	0	33
34	2017	210	34	Misc Income Charges	171,534	157,694	0	0	34
35	2017	210	35	Uncollectible accounts	0	0	0	0	35
36	2017	210	36	Total Misc Deductions	209,361	226,272	0	0	36
37	2017	210	37	Income avail for fix chg	24,656,489	22,034,162	0	0	37
38	2017	210	38	Fixed int not in default	978,611	953,454	0	0	38
39	2017	210	39	Interest in default	0	0	0	0	39
40	2017	210	40	Interest on unfund debt	46,618	36,003	0	0	40
41	2017	210	41	Amort of disc on f debt	7,105	6,958	0	0	41
42	2017	210	42	Total Fixed Charges	1,032,334	996,415	0	0	42
43	2017	210	43	Income aft fixed charges	23,624,155	21,037,747	0	0	43
44	2017	210	44	Contingent Interest	7,772	7,604	0	0	44
45	2017	210	45	Unusual item (dr) cr	0	0	0	0	45
46	2017	210	46	Income from Cont Op BT	23,616,383	21,030,143	0	0	46
47	2017	210	47	Fed Income taxes on ord	5,349,629	4,546,321	0	0	47
48	2017	210	48	State Inc taxes on ord	692,946	547,351	0	0	48
49	2017	210	49	Other Inc taxes on ord	62,627	42,304	0	0	49
50	2017	210	50	Prov for deferred taxes	(19,296,861)	2,691,854	0	0	50
51	2017	210	51	Total Prov for Inc Taxes	(13,191,659)	7,827,830	0	0	51
52	2017	210	52	Income from Contin Ops	36,808,042	13,202,313	0	0	52
53	2017	210	53	Inc from discount ops	0	0	0	0	53
54	2017	210	54	Gain on disposal dis ops	0	0	0	0	54
55	2017	210	55	Income before Extraord	36,808,042	13,202,313	0	0	55
56	2017	210	56	Extraordinary Items	0	0	0	0	56
57	2017	210	57	Inc Tax on Extraord Item	0	0	0	0	57
58	2017	210	58	Def Taxes Extraord Item	0	0	0	0	58
59	2017	210	59	Total Extraordinary Item	0	0	0	0	59
60	2017	210	60	Rent for lease rd n eq 66	0	0	0	0	60
61	2017	210	61	Net Income (L.55,59,60)	36,808,042	13,202,313	0	0	61
62	2017	210	62	Less NI to Non Ctl Int NU	1,959	1,906	0	0	62

Schedule 210 Results of Operations (Income Statement) (\$000) with renumbered lines

4

Class I Railroad U.S. Total

15:25 Tuesday, June 26, 2018

b=current year c=preceding year d=freight-related e=passenger related

Obs	Year	Sched	Line No	label	colb	colc	cold	cole	Line No
1	2017	210	1	Freight	67,345,928	63,237,868	67,345,928	0	1
2	2017	210	2	Passenger	127,048	121,150	0	127,048	2
3	2017	210	3	Passenger related	1,177	123	0	1,177	3
4	2017	210	4	Switching	220,016	229,129	220,016	0	4
5	2017	210	5	Water Transfers	241,722	237,777	241,722	0	5
6	2017	210	6	Demurrage	627,503	618,328	627,503	0	6
7	2017	210	7	Incidental	1,315,943	1,201,840	1,315,943	0	7
8	2017	210	8	Joint Facility - Credit	21,755	19,013	21,755	0	8
9	2017	210	9	Joint Facility - Debit	0	0	0	0	9
10	2017	210	10	Rwy Op Rev excl xfers	69,901,092	65,665,228	69,772,867	128,225	10
11	2017	210	11	Transfers from Gov Auth	87,984	89,503	5,225	82,759	11
12	2017	210	12	Amort of Def Xfers f Gov	8,434	7,331	8,434	0	12
13	2017	210	13	Total Operating Revenue	69,997,510	65,762,062	69,786,526	210,984	13
14	2017	210	14	Total Operating Expense	47,241,030	44,908,540	47,034,259	206,771	14
15	2017	210	15	Net Revenue from Ops	22,756,480	20,853,522	22,752,267	4,213	15
16	2017	210	16	Rev from prop otc ops	91,212	33,165	0	0	16
17	2017	210	17	Misc rent income	260,200	239,108	0	0	17
18	2017	210	18	Sep Operated Properties	0	0	0	0	18
19	2017	210	19	Dividend Income (cost)	19,271	20,224	0	0	19
20	2017	210	20	Interest Income	827,384	529,778	0	0	20
21	2017	210	21	Sinking and Other Funds	0	0	0	0	21
22	2017	210	22	Release of prem on debt	5,698	5,787	0	0	22
23	2017	210	23	Reimbursements received	0	0	0	0	23
24	2017	210	24	Misc income	266,636	335,079	0	0	24
25	2017	210	25	Aff Dividends (eq meth)	142,969	114,689	0	0	25
26	2017	210	26	Aff Eq In Undist Earns	496,000	129,082	0	0	26
27	2017	210	27	Total Other Income	2,109,370	1,406,912	0	0	27
28	2017	210	28	Total Income (L. 15, 27)	24,865,850	22,260,434	0	0	28
29	2017	210	29	Exp of prop otc ops	37,827	68,578	0	0	29
30	2017	210	30	Misc taxes	0	0	0	0	30
31	2017	210	31	Sep op properties - loss	0	0	0	0	31

Obs	Year	Sched	Line No	Label	colb	colc	Line No
1	2017	200	1	Cash and Cash Equivalent	1,455,837	1,789,895	1
2	2017	200	2	Temporary Cash Investmnt	42,937	90,406	2
3	2017	200	3	Special Deposits	16	502	3
4	2017	200	4	a/r loan and notes	3,238	4,557	4
5	2017	200	5	a/r interline	361,721	306,946	5
6	2017	200	6	a/r customers	2,865,669	2,517,713	6
7	2017	200	7	a/r other	690,498	699,504	7
8	2017	200	8	a/r accrued	805,164	705,764	8
9	2017	200	9	a/r from affiliates	15,859,035	12,445,832	9
10	2017	200	10	a/r less allow uncollect	132,664	145,296	10
11	2017	200	11	Wkg Funds Prepmnt DIT dr	655,730	586,706	11
12	2017	200	12	Materials and Supplies	2,402,823	2,443,376	12
13	2017	200	13	Other Current Assets	254,319	158,755	13
14	2017	200	14	Total Current Assets	25,264,323	21,604,660	14
15	2017	200	15	OA Special Funds	197,464	73,053	15
16	2017	200	16	Invest Advan Affiliates	16,170,284	12,526,893	16
17	2017	200	17	Other inv and advances	12,714	11,935	17
18	2017	200	18	Prop Used in non Carrier	1,706,224	1,623,506	18
19	2017	200	19	Other Assets	16,499,872	16,342,127	19
20	2017	200	20	Other Deferred Debits	1,549,643	1,338,199	20
21	2017	200	21	Accum Def Income Tax Dr	0	1,022	21
22	2017	200	22	Total Other Assets	36,136,201	31,916,735	22
23	2017	200	23	R&E Road	195,266,713	187,205,662	23
24	2017	200	24	R&E Equipment	52,330,997	51,284,088	24
25	2017	200	25	R&E Unallocated items	3,530,202	4,350,655	25
26	2017	200	26	R&E Accum Depreciation	(58,991,136)	(54,881,239)	26
27	2017	200	27	Net Road and Equipment	192,136,776	187,959,166	27
28	2017	200	28	Total Assets	253,537,300	241,480,561	28
29	2017	200	29	CL loan & notes payable	100,000	100,000	29
30	2017	200	30	CL a/p interline	174,082	295,872	30
31	2017	200	31	CL audited accts & wages	699,487	769,402	31

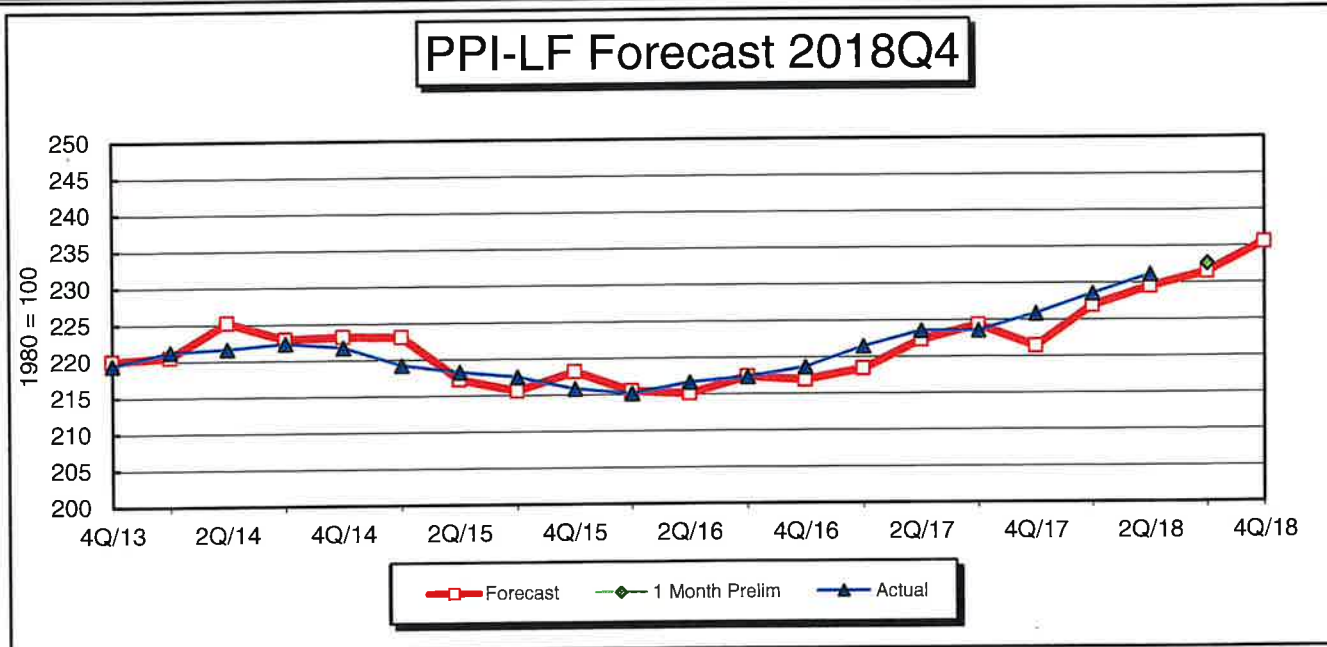
Obs	Year	Sched	Line No	Label	colb	colc	Line No
32	2017	200	32	CL other accounts payable33	610,801	619,846	32
33	2017	200	33	CL int and dividends pbl34	77,632	89,504	33
34	2017	200	34	CL payable to affil. 35	2,290,357	1,904,255	34
35	2017	200	35	CL accrued a/p 36	6,641,317	5,949,768	35
36	2017	200	36	CL taxes accrued 37	1,923,840	2,244,856	36
37	2017	200	37	CL other current liabil.38	413,066	355,320	37
38	2017	200	38	CL Eq Obs & LTD due w1yr39	294,975	349,855	38
39	2017	200	39	Total Current Liabilit. 40	13,225,557	12,678,678	39
40	2017	200	40	NC Funded debt unmatured41	2,128,494	1,761,862	40
41	2017	200	41	NC Equipment obligations42	1,680,253	1,771,531	41
42	2017	200	42	NC Capitalized lease obs43	1,214,668	1,467,790	42
43	2017	200	43	NC Debt in Default 44	0	0	43
44	2017	200	44	NC a/p Affiliates 45	15,631,300	15,741,962	44
45	2017	200	45	NC Unamortized debt prem46	(15,783)	(5,697)	45
46	2017	200	46	NC Interest in Default 47	0	0	46
47	2017	200	47	NC Deferr rev - xfr gov 48	282,205	269,236	47
48	2017	200	48	NC Accum Def Inc Tax Cr 49	40,502,167	59,594,555	48
49	2017	200	49	NC Otr LT Liab & Def Cr 50	8,850,936	8,938,867	49
50	2017	200	50	Total Non Current Liab. 51	70,274,240	89,540,106	50
51	2017	200	51	Sh Eq Total Capital Stk52	405,488	405,487	51
52	2017	200	52	Sh Eq Common Stock 53	384,488	384,487	52
53	2017	200	53	Sh Eq Preferred Stock 54	21,000	21,000	53
54	2017	200	54	Sh Eq Discnt on Cap Stk55	0	0	54
55	2017	200	55	Sh Eq Additnl Capital 56	61,867,084	61,863,544	55
56	2017	200	56	Sh Eq Ret Earn Appropri57	811	811	56
57	2017	200	57	Sh Eq Ret Earn Unapprop58	108,727,573	78,325,128	57
58	2017	200	58	Sh Eq Less Treasury Stk60	3,787	3,787	58
59	2017	200	59	Accum Otr Comp Income NU	(1,278,355)	(1,646,185)	59
60	2017	200	60	Total Stockhldr Equity61	169,718,814	138,944,998	60
61	2017	200	61	Non-controlling interestNU	318,689	316,779	61
62	2017	200	62	Total Equity (L.61+62)NU	170,037,503	139,261,777	62

PPI-LF Forecast (for Other and Lease Rentals Components)

	Forecast	Actual	1 Month Prelim
4Q/13	220.0	219.4	
1Q/14	220.5	221.2	
2Q/14	225.2	221.6	
3Q/14	222.9	222.3	
4Q/14	223.2	221.7	
1Q/15	223.1	219.2	
2Q/15	217.2	218.2	
3Q/15	215.6	217.5	
4Q/15	218.2	215.8	
1Q/16	215.5	215.1	
2Q/16	215.1	216.6	
3Q/16	217.4	217.3	
4Q/16	216.9	218.6	
1Q/17	218.4	221.4	
2Q/17	222.3	223.5	
3Q/17	224.3	223.5	
4Q/17	221.4	225.8	
1Q/18	226.9	228.5	
2Q/18	229.5	231.1	
3Q/18	231.5		232.6
4Q/18	235.5		

1980 Base

	PPI-LF Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2018Q4						
Low	207.5	232.6	3.0%			
Midpoint	210.1	235.5	4.3%	1.2%	1.9%	1.7%
High	212.6	238.3	5.5%			



Forecast Report for PPILF

Description: PPILF

Expert Analysis

Using rule-based logic I have narrowed down the choice to exponential smoothing or Box-Jenkins.
I will perform an out-of-sample test to select between these two approaches.

The cumulative MAD for Exponential smoothing was 1.85 and for Box-Jenkins was 2.15.
The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each method.

Based on the lower MAD, I will use Exponential Smoothing.

Model Details

Expert selection

Multiplicative Winters: Linear trend, Multiplicative seasonality

LM(0.931, 0.787, 0.999)

Confidence limits proportional to indexes

Component	Smoothing Wgt		Final Value
Level	0.9306		207.6
Trend	0.787		0.5991
Seasonal	0.9994		
Seasonal Indexes			
Jan - Mar	1.001	0.9999	0.9995
Apr - Jun	0.9996	0.9995	0.9998
Jul - Sep	0.9996	1	0.9997
Oct - Dec	1.001	1.001	0.9999

Within-Sample Statistics

Sample size	72	No. parameters	3
Mean	196.83	Std. deviation	3.68
R-square	0.99	Adj. R-square	0.99
Durbin-Watson	1.71	Ljung-Box(18)	27.4 P=0.93
Forecast error	0.4	BIC	0.43
MAPE	0.16	SMAPE	0.16
RMSE	0.39	MAD	0.32
MAD/Mean Ratio	0		

Historic Data

Date	Historic
2012-Aug	193.3
2012-Sep	193.7
2012-Oct	193.9
2012-Nov	194
2012-Dec	194.2
2013-Jan	195.3

2013-Feb	196.1
2013-Mar	196.1
2013-Apr	195.9
2013-May	195.5
2013-Jun	195.4
2013-Jul	195.2
2013-Aug	195.3
2013-Sep	195.1
2013-Oct	195.4
2013-Nov	195.5
2013-Dec	195.9
2014-Jan	197.2
2014-Feb	197.6
2014-Mar	197.3
2014-Apr	197.7
2014-May	197.6
2014-Jun	197.7
2014-Jul	198.2
2014-Aug	198.4
2014-Sep	198.3
2014-Oct	198.2
2014-Nov	197.4
2014-Dec	196.7
2015-Jan	196
2015-Feb	195.4
2015-Mar	195
2015-Apr	194.8
2015-May	194.9
2015-Jun	195.2
2015-Jul	194.9
2015-Aug	193.9
2015-Sep	193.1
2015-Oct	192.9
2015-Nov	192.3
2015-Dec	191.9
2016-Jan	191.9
2016-Feb	191.8
2016-Mar	192.1
2016-Apr	192.8
2016-May	193.4
2016-Jun	193.7
2016-Jul	193.7
2016-Aug	194
2016-Sep	193.9
2016-Oct	194.3
2016-Nov	194.9
2016-Dec	195.6
2017-Jan	196.8
2017-Feb	197.8
2017-Mar	198.7
2017-Apr	199.3

2017-May	199.2
2017-Jun	199.4
2017-Jul	199.2
2017-Aug	199.7
2017-Sep	200
2017-Oct	200.9
2017-Nov	201.5
2017-Dec	201.7
2018-Jan	203
2018-Feb	203.8
2018-Mar	204.8
2018-Apr	205.2
2018-May	206.1
2018-Jun	207
2018-Jul	207.5

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2018-Aug	207.364	208.204	209.044
2018-Sep	207.078	208.708	210.338
2018-Oct	207.425	209.571	211.718
2018-Nov	207.569	210.131	212.693
2018-Dec	207.629	210.547	213.465
2019-Jan	208.066	211.302	214.537
2019-Feb	208.226	211.75	215.275
2019-Mar	208.479	212.27	216.061
2019-Apr	208.838	212.878	216.917
2019-May	209.187	213.461	217.735
2019-Jun	209.627	214.123	218.619
2019-Jul	209.978	214.686	219.395

Databases, Tables & Calculators by Subject



Change Output Options:

From: 2017 To: 2018 GO

☐ include graphs
 ☐ include annual averages

[More Formatting Options](#) →

Data extracted on: August 13, 2018 (9:12:05 AM)

PPI Commodity Data

Series Id: WPU03T15M05

Not Seasonally Adjusted

Series Title: PPI Commodity data for Industrial commodities less fuels, not seasonally adjusted

Group: Industrial Commodities less fuels

Item: Industrial commodities less fuels

Base Date: 198200

Download: [xlsx](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	196.8	197.8	198.7	199.3	199.2	199.4	199.2	199.7	200.0	200.9	201.5	201.7
2018	203.0	203.8	204.8	205.2(P)	206.1(P)	207.0(P)	207.5(P)					

P : Preliminary. All indexes are subject to revision four months after original publication.

TOOLS

[Areas at a Glance](#)
[Industries at a Glance](#)
[Economic Releases](#)
[Databases & Tables](#)
[Maps](#)

CALCULATORS

[Inflation](#)
[Injury And Illness](#)

HELP

[Help & Tutorials](#)
[FAQs](#)
[Glossary](#)
[About BLS](#)
[Contact Us](#)

INFO

[What's New](#)
[Careers @ BLS](#)
[Find It! DOL](#)
[Join our Mailing Lists](#)
[Linking & Copyright Info](#)

RESOURCES

[Inspector General \(OIG\)](#)
[Budget and Performance](#)
[No Fear Act](#)
[USA.gov](#)
[Benefits.gov](#)

Forecast Error Calculation

	2016 Weight	Second Quarter 2018		Difference		Notes
		2018Q2 Forecast	2018Q2 Actual	Pt.	Pct.	
Labor	35.6%	422.5	422.5	0.0	0%	* actual different from forecast this time
Fuel	10.7%	248.9	261.4	12.5	5%	from 1st month of quarter
M&S	5.0%	258.0	258.0	0.0	0%	* actual=forecast
Equip Rents	5.9%	228.9	230.4	1.5	1%	from Equipment Rents below
Depreciation	15.6%	224.6	223.5	-1.1	0%	PPI-RE
Interest	2.2%	60.5	60.5	0.0	0%	* actual=forecast
Other	25.0%	229.5	231.1	1.6	1%	PPI-LF
Weighted Avg	100.0%					
1980 = 100		297.2	298.8			calculated
1980 = 100 (linked)		274.9	274.2			calculated
4Q17 = 100	2.645	103.9	103.7			calculated
4Q12 = 100	2.976	92.4	92.1			calculated
4Q07 = 100	2.459	111.8	111.5			calculated
4Q02 = 100	1.921	143.1	142.7			calculated
4Q97 = 100	1.732	158.7	158.3			calculated
Forecast Error		-0.2				calculated -0.002 = RCAF adj.
Prior Quarter						
1980 = 100		296.8	296.0 **			
1980 = 100 (linked)		274.5	271.6			
4Q17 = 100		103.8	102.7			calculated
4Q12 = 100		92.2	91.3			calculated
4Q07 = 100		111.6	110.5			calculated
4Q02 = 100		142.9	141.4			calculated
4Q97 = 100		158.5	156.8			calculated
Equipment Rents						
Car Hire	58.3%	209.2	210.0			from Equipment Rents/CHARM
Lease Rentals	41.7%	229.5	231.1			(equals PPI-LF from above)
Weighted Average		217.7	218.8			calculated
Linked		228.9	230.4			calculated
Prior Quarter						
Weighted Average		215.6	216.0 **			
Linked		226.7	227.5			
Sum of Weights	ok					** if fourth quarter, weighted avg for prior needs to use new weights, linked is ok
Sum of ER Wt.	ok					

Factors to change from
1982=100 to 1980 = 100

202.00 202.00 202.10

0.9040

205.20 206.10 207.00

0.8920

All-Inclusive Index (Actual)

	16 Wts	3Q/17 15 Wts	3Q/17 16 Wts	% Chg.	4Q/17 16 Wts	% Chg.	1Q/18 16 Wts	% Chg.	2Q/18 16 Wts	% Chg.	3Q/18 16 Wts	% Chg.
Labor	35.6%	422.8	422.8	0.0%	415.1	-1.8%	419.6	1.1%	422.5	0.7%	434.3	2.8%
Fuel	10.7%	192.4	192.4	0.0%	233.3	21.3%	254.6	9.1%	261.4	2.7%	274.0	4.8%
M&S	5.0%	252.6	252.6	0.0%	254.8	0.9%	251.0	-1.5%	258.0	2.8%	263.7	2.2%
Equipment Rents	5.9%	224.2	224.2	0.0%	226.6	1.1%	227.5	0.4%	230.4	1.3%	0.0	NA
Depreciation	15.6%	226.3	226.3	0.0%	224.7	-0.7%	223.8	-0.4%	223.5	-0.1%		NA
Interest	2.2%	60.6	60.6	0.0%	60.5	-0.2%	60.5	0.0%	60.5	0.0%	60.5	0.0%
Other	25.0%	223.5	223.5	0.0%	225.8	1.0%	228.5	1.2%	231.1	1.1%		NA
	1.0000											
Weighted Avg.		288.0	289.5	0.5%	291.7	0.8%	296.0	1.5%	298.8	0.9%	198.4	-33.6%
Linked		265.7			267.7	0.8%	271.6	1.5%	274.2	1.0%	182.1	-33.6%
10/1/80	1.027	258.7			260.7	0.8%	264.5	1.5%	267.0	0.9%	177.3	-33.6%
10/1/82	1.209	219.8			221.4	0.7%	224.6	1.4%	226.8	1.0%	150.6	-33.6%
4Q/87	1.322	201.0			202.5	0.7%	205.4	1.4%	207.4	1.0%	137.7	-33.6%
4Q/92	1.569	169.3			170.6	0.8%	173.1	1.5%	174.8	1.0%	116.1	-33.6%
4Q/97	1.732	153.4			154.6	0.8%	156.8	1.4%	158.3	1.0%	105.1	-33.6%
4Q/02	1.921	138.3			139.4	0.8%	141.4	1.4%	142.7	0.9%	94.8	-33.6%
4Q/07	2.459	108.1			108.9	0.7%	110.5	1.5%	111.5	0.9%	74.1	-33.5%
4Q/12	2.976	89.3			90.0	0.8%	91.3	1.4%	92.1	0.9%	61.2	-33.6%
4Q/17	2.645	100.5			101.2	0.7%	102.7	1.5%	103.7	1.0%	68.8	-33.7%

Note: 2018Q1 Labor is different from the filing because of late-arriving information on H&W. See 2018Q2 RCAF Appendix A, page 2.

Equipment Rents

Car Hire	58.3%	205.2	205.2	0.0%	207.5	1.1%	207.1	-0.2%	210.0	1.4%		NA
Lease Rentals	41.7%	223.5	223.5	0.0%	225.8	1.0%	228.5	1.2%	231.1	1.1%	0.0	NA
	1.0000											
ER Weighted Avg		212.8	212.8	0.0%	215.1	1.1%	216.0	0.4%	218.8	1.3%	0.0	NA
ER Linked		224.2			226.6	1.1%	227.5	0.4%	230.4	1.3%	0.0	NA

Impact/Check of weight change	15 Wts	16 Wts
Labor	134.028	150.517
Fuel	40.212	20.587
Material & Supplies	13.135	12.630
Equipment Rents	12.107	13.228
Depreciation	28.514	35.303
Interest	0.909	1.333
Other	50.735	55.875
Weighted Avg.	279.639	289.472
ER Weighted Avg.	213.1605	212.8311

As info only

RCAF Fuel (Actual All-Inclusive Index)

April 2018

Monthly Report

	April 2018 Price (cents) (1)	1/1/81 Price (cents) (2)	1/91 New Method Linking Factors (3)	April 2018 Index 1/1/81=100 (4)	Linking Factor 1980=100 (5)	April 2018 1980=100 Current Index (6)
U.S.	213.94	89.34	99.415	238.07	1.096	260.92

(4) = (1) / (2) x (3)

(6) = (4) x (5)

Final Actual All-inclusive Index Used for RCAF's Forecast Error Adjustment

	April 2018 1980=100 Current Index	Adjustment Factor	April 2018 1980=100 Linked Index
U.S.	260.92	1.00192	261.42 ←

January	=	Q1
April	=	Q2
July	=	Q3
October	=	Q4

Car Hire for RCAF

Car Hire Index used in RCAF's All-Inclusive Index (Actual)

		1980	Aug 3Q/17	Nov 4Q/17	Feb 1Q/18	May 2Q/18	Aug 3Q/18
RATE							
RR-OWNED TIME		31.00	64.00	64.00	64.00	64.00	64.00
RR-OWNED MILEAGE		4.69	6.70	6.70	6.70	6.60	6.70
PRIVATELY-OWNED CARS		25.47	53.76	54.42	54.45	55.37	55.66
AUTORACKS		47.00	84.47	86.38	83.50	84.84	86.16
INDEX							
RR-OWNED TIME		100.0	206.5	206.5	206.5	206.5	206.5
RR-OWNED MILEAGE		100.0	142.9	142.9	142.9	140.7	142.9
PRIVATELY-OWNED CARS		100.0	211.1	213.6	213.8	217.4	218.5
AUTORACKS		100.0	179.7	183.8	177.7	180.5	183.3
CAR HIRE INDEX (old wts)	2015	100.0	205.1	--	--	--	--
CAR HIRE INDEX (new wts)	2016	100.0	203.9	206.2	205.8	208.7	209.9
CAR HIRE INDEX (LINKED)		100.0	205.2	207.5	207.1	210.0	211.2

Note: Indexes are rounded, rates are full float.

Car Hire Data From CHARM

2017 (first day of month)

2018 (first day of month)

Railroad Equipment

No. of Cars (cars with rates only)

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Superstructures (Vehicular Flats)	8,341	8,815	9,030	9,254	9,520	9,614	9,796	9,891	10,098	10,461	10,544	10,629	10,741	10,849

Rate (in cents)

Superstructures #3 - Auto Rack	54.0	62.0	65.0	67.0	71.0	73.0	75.0	75.0	77.0	81.0	84.0	84.0	86.0	87.0
--------------------------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

All other #1 - Time	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0
---------------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

All other #2 - Mileage	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.6	6.6	6.6	6.7
------------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Private Equipment

No. of Cars (cars with rates only)

Superstructures (Vehicular Flats)	56,048	56,095	56,066	55,978	55,842	55,875	55,956	55,925	55,813	55,698	55,640	55,590	55,504	55,500
-----------------------------------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

Covered Hoppers	397,633	400,103	402,279	403,818	405,332	407,888	411,930	413,529	415,267	416,736	417,748	419,280	421,139	422,430
-----------------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

Tank Cars	405,127	405,272	405,476	405,805	405,481	405,753	406,074	406,011	406,019	405,210	405,431	405,733	405,718	405,541
-----------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

Others	291,842	291,943	291,843	292,787	292,671	293,501	293,142	293,781	294,358	294,080	292,168	290,938	291,908	291,714
--------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------	---------

Rate (in cents)

Superstructures #1 - Time	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0	84.0
---------------------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Superstructures #2 - Mileage	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
------------------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Superstructures #3 - Auto Rack	88.0	88.0	88.0	89.0	89.0	89.0	89.0	85.0	85.0	85.0	85.0	85.0	86.0	86.0
--------------------------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Covered Hoppers #2 - Mileage	45.5	45.6	45.7	45.8	45.9	45.9	46.0	46.0	45.9	46.0	46.1	46.1	46.2	46.2
------------------------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Tank Cars #2 - Mileage	85.2	85.3	86.8	86.9	87.0	87.0	87.1	87.2	89.4	89.5	89.6	89.7	89.9	90.0
------------------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Others #1 - Time	87.0	87.0	87.0	87.0	87.0	87.0	88.0	87.0	87.0	88.0	88.0	89.0	89.0	90.0
------------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Others #2 - Mileage	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.2	8.2	8.2
---------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

AVERAGE RATES

Private Superstructures	21.14	21.14	21.14	21.14	21.14	21.14	21.14	21.14	21.14	21.14	21.14	21.14	21.14	21.14
-------------------------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

Private Others	27.41	27.41	27.41	27.41	27.41	27.41	27.64	27.41	27.41	27.64	27.64	27.96	27.96	28.18
----------------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

Private Total	53.70	53.76	54.31	54.36	54.42	54.38	54.50	54.45	55.15	55.25	55.37	55.51	55.58	55.66
---------------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

Autoracks	83.60	84.47	84.81	85.88	86.38	86.65	86.91	83.50	83.77	84.37	84.84	84.84	86.00	86.16
-----------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

Car Hire Weights	"Old Wts" New Wts"	
	2015	2016
For RCAF & RCR		
RR-owned Time	0.124	0.091
RR-owned Mileage	0.062	0.058
Privately-owned Cars	0.776	0.762
Autoracks	0.038	0.089
----- Check sum	1.000	1.000

Weights for Equipment Rents		
(not used in Car Hire calculation)		
	2015	2016
Car Hire - U.S.	0.582	0.583
Lease Rentals - U.S.	0.418	0.417
----- Check sum	1.000	1.000

Notes:

The Car Hire Index and Lease Rentals Index are weighed together to calculate the Equipment Rents Index

CHARM is the Car Hire Accounting Rate Master

The 4 bold lines are used for the Car Hire Rate. Private Total uses a weighted average of the Covered Hoppers, Tank Cars, Combined Private Superstructures, and Combined Private Others rates.

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 05/2018

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	10,544	111	0.066	84
Railroad	Number of Zero-Rated Vehicular Flats	136	.	.	.
Railroad	All Other Cars	418,803	64	0.066	.
Railroad	Number of Zero-Rated Other Cars	17,809	.	.	.
Railroad	Total Railroad Equipment	447,292	.	.	.
		.	.	.	.
Private	Vehicular Flats	55,640	84	0.014	85
Private	Number of Zero-Rated Vehicular Flats	101	.	.	.
Private	Covered Hoppers	417,748	0	0.461	.
Private	Number of Zero-Rated Covered Hoppers	13,797	.	.	.
Private	Tanks	405,431	0	0.896	.
Private	Number of Zero-Rated Tanks	8,625	.	.	.
Private	All Other Cars	292,168	88	0.081	.
Private	Number of Zero-Rated Other Cars	26,440	.	.	.
Private	Total Private Equipment	1,219,950	.	.	.

Notes
This report excludes these car types: D (Locomotives), M (MoW, EOTs, etc.), U (Containers), Z (Trailers).
All TTX equipment (including ABOX, RBOX, GONX) is contained in the Private section of report.
Equipment can be zero rated due to owners supplying incorrect or insufficient information to the car accounting process.
Zero-rated equipment includes those with Umler Rate_Indicator of 6 and 0 (zero).
Zero-rated equipment is excluded from the averages shown in this report.
Equipment must be Active in Umler to be included in this report; Pre-registered and Inactive cars are excluded.

RCAF - Depreciation

Series ID : wpu144

Not Seasonally Adjusted

Group : Transportation equipment

Item : Railroad equipment

		Forecast Year 2018			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	18Q1	18Q2	18Q3	18Q4
For Actual	→	17Q3	17Q4	18Q1	18Q2
January	2017	201.9	201.9	201.9	201.9
February	2017	204.1	204.1	204.1	204.1
March	2017	203.3	203.3	203.3	203.3
April	2017	203.4	203.4	203.4	203.4
May	2017	203.5	203.5	203.5	203.5
June	2017	204.6	204.6	204.6	204.6
July	2017	204.6	203.6	203.6	203.6
August	2017	204.6	204.5	204.5	204.5
September	2017	204.6	203.8	203.8	203.8
October	2017	203.9	203.9	202.8	202.8
November	2017		202.8	201.7	201.7
December	2017		202.7	201.6	201.6
January	2018		203.1	203.1	202.1
February	2018			201.9	202.1
March	2018			201.9	202.0
April	2018			202.0	202.0
May	2018				202.0
June	2018				202.1
July	2018				202.4
Actual Qtr.		204.6	203.1	202.3	202.0

1980=100

Actual Qtr.	226.3	224.7	223.8	223.5
First Mo. next qtr.	225.6	224.7	223.5	223.9

0.904 =1980

Databases, Tables & Calculators by Subject

SHARE ON: [f](#) [t](#) [in](#)

Change Output Options:

From: To: [GO](#)

☐ include graphs
 ☐ include annual averages

[More Formatting Options](#) ➔

Data extracted on: August 13, 2018 (8:56:59 AM)

PPI Commodity Data

Series Id: WPU144

Not Seasonally Adjusted

Series Title: PPI Commodity data for Transportation equipment-Railroad equipment, not seasonally adjusted

Group: Transportation equipment

Item: Railroad equipment

Base Date: 198200

Download: [Excel](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	201.9	204.1	203.3	203.4	203.5	204.6	203.6	204.5	203.8	202.8	201.7	201.6
2018	202.1	202.1	202.0	202.0(P)	202.0(P)	202.1(P)	202.4(P)					

P : Preliminary. All indexes are subject to revision four months after original publication.

TOOLS

[Areas at a Glance](#)
[Industries at a Glance](#)
[Economic Releases](#)
[Databases & Tables](#)
[Maps](#)

CALCULATORS

[Inflation](#)
[Injury And Illness](#)

HELP

[Help & Tutorials](#)
[FAQs](#)
[Glossary](#)
[About BLS](#)
[Contact Us](#)

INFO

[What's New](#)
[Careers @ BLS](#)
[Find It! DOL](#)
[Join our Mailing Lists](#)
[Linking & Copyright Info](#)

RESOURCES

[Inspector General \(OIG\)](#)
[Budget and Performance](#)
[No Fear Act](#)
[USA.gov](#)
[Benefits.gov](#)

RCAF - Other

Series ID : wpu03t15m05

Not Seasonally Adjusted

Group : Industrial Commodities less fuels

Item : Industrial commodities less fuels

		Forecast Year 2018			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	18Q1	18Q2	18Q3	18Q4
For Actual	→	17Q3	17Q4	18Q1	18Q2
January	2017	196.8	196.8	196.8	196.8
February	2017	197.8	197.8	197.8	197.8
March	2017	198.7	198.7	198.7	198.7
April	2017	199.3	199.3	199.3	199.3
May	2017	199.2	199.2	199.2	199.2
June	2017	199.4	199.4	199.4	199.4
July	2017	199.0	199.2	199.2	199.2
August	2017	199.5	199.7	199.7	199.7
September	2017	199.7	200.0	200.0	200.0
October	2017	200.9	200.9	200.9	200.9
November	2017		201.4	201.5	201.5
December	2017		201.9	201.7	201.7
January	2018		203.0	203.0	203.0
February	2018			203.8	203.8
March	2018			204.5	204.8
April	2018			205.2	205.2
May	2018				206.1
June	2018				207.0
July	2018				207.5
Actual Qtr.		199.4	201.4	203.8	206.1

1980=100

Actual Qtr.

First Mo. next qtr.

223.5	225.8	228.5	231.1
225.2	227.6	230.0	232.6

0.892 =1980

Databases, Tables & Calculators by Subject

SHARE ON: [f](#) [t](#) [in](#)

Change Output Options:

From: [2017](#) To: [2018](#) [GO](#)

☐ include graphs ☐ include annual averages

[More Formatting Options](#) [➔](#)

Data extracted on: August 13, 2018 (9:12:05 AM)

PPI Commodity Data

Series Id: WPU03T15M05

Not Seasonally Adjusted

Series Title: PPI Commodity data for Industrial commodities less fuels, not seasonally adjusted

Group: Industrial Commodities less fuels

Item: Industrial commodities less fuels

Base Date: 198200

Download: [xlsx](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	196.8	197.8	198.7	199.3	199.2	199.4	199.2	199.7	200.0	200.9	201.5	201.7
2018	203.0	203.8	204.8	205.2(P)	206.1(P)	207.0(P)	207.5(P)					

P : Preliminary. All indexes are subject to revision four months after original publication.

TOOLS

[Areas at a Glance](#)
[Industries at a Glance](#)
[Economic Releases](#)
[Databases & Tables](#)
[Maps](#)

CALCULATORS

[Inflation](#)
[Injury And Illness](#)

HELP

[Help & Tutorials](#)
[FAQs](#)
[Glossary](#)
[About BLS](#)
[Contact Us](#)

INFO

[What's New](#)
[Careers @ BLS](#)
[Find It! DOL](#)
[Join our Mailing Lists](#)
[Linking & Copyright Info](#)

RESOURCES

[Inspector General \(OIG\)](#)
[Budget and Performance](#)
[No Fear Act](#)
[USA.gov](#)
[Benefits.gov](#)

**AAR 2017 7/25/2018
U.S.**

Union	Employees	Straight Time		PFTNW	Union Lump
	Paid	Hours	Comp.	Comp.	Sums
UTU	36,158	66,893,869	1,953,980,612	647,467,600	15,244,612
TCU	5,081	9,094,833	284,663,704	40,234,756	12,075,275
BLET	24,886	50,095,640	1,738,042,440	559,271,737	111,863,288
SMW	906	1,620,871	49,255,293	7,369,200	7,418
BRS	7,462	14,497,307	460,393,856	96,541,584	520,420
BMWE	23,077	41,079,028	1,153,238,094	215,382,011	815,017
TCU-CAR	8,893	16,378,588	490,172,881	70,837,629	238,869
NCFO	2,325	4,185,745	106,066,080	14,082,107	85,661
IAM	6,634	12,074,757	367,197,312	59,448,454	296,972
IBBM	839	1,474,484	43,319,407	6,610,698	25,233
IBEW	5,565	10,117,502	311,812,882	50,960,563	320,780
ATDA	2,272	4,111,161	174,777,254	27,082,415	2,968,186
UTU-YMD	1,714	3,007,338	123,922,480	23,538,022	2,039,826
OTHER	24,508	52,568,366	2,622,053,012	66,445,460	
Total	150,320	287,199,489	\$9,878,895,307	\$1,885,272,236	\$146,501,557
ST Comp less Union Lump Sums			\$9,732,393,750		

Checks

OK Match	OK Match	OK Match	OK Match
Total including non-union			\$540,749,690

US less E+W s.b. 0

0 0 0 0 0

RCAF Weights

	U.S.	2017	2016	Amt Chg	2015	2014	2013
Labor	\$16,802,934	35.0%	35.6%	-0.6%	35.0%	31.7%	31.6%
Fuel	6,243,720	13.0%	10.7%	2.3%	13.4%	20.9%	22.1%
Mat & Sup.	2,370,769	4.9%	5.0%	-0.1%	5.4%	5.2%	4.9%
Equip. Rents	2,504,095	5.2%	5.9%	-0.7%	5.8%	5.4%	5.4%
Depreciation	7,578,549	15.8%	15.6%	0.2%	13.9%	12.6%	12.0%
Interest	1,031,957	2.1%	2.2%	-0.1%	1.9%	1.5%	1.9%
Other	11,534,192	24.0%	25.0%	-1.0%	24.6%	22.7%	22.1%
Total	\$48,066,216	100.0%	100.0%		100.0%	100.0%	100.0%

Check

410 620f	47,034,259	key this cell only
Interest	1,031,957	
Total	48,066,216	ok

Bolded number was adjusted to force rounded numbers to add to 100.0%.

Analysis of Other -- as info only

Other	U.S.	2017	2016	Amt Chg.
Purch Service	\$7,737,042	16.1%	16.5%	-0.4%
Taxes	1,384,652	2.9%	2.9%	-0.1%
Cas & Insuran	544,528	1.1%	1.3%	-0.2%
Loss & Dam	87,286	0.2%	0.2%	0.0%
Gen & Admn	1,780,684	3.7%	4.1%	-0.4%
Total	\$11,534,192	24.0%	25.0%	-1.0%

RCAF Internal Weights

	U.S.	2017	2016	Amt Diff
Labor				
Wages	11,685,610	69.5%	70.8%	-1.3%
Wage Supplem	5,117,324	30.5%	29.2%	1.3%
Total	16,802,934	100.0%	100.0%	
Check	ok			

Equip. Rents

Car Hire	1,540,234	61.5%	58.3%	3.2%
Lease Rents	963,861	38.5%	41.7%	-3.2%
Total	2,504,095	100.0%	100.0%	
Check	ok			

Car Hire

RR Time excl Autork	6,632	0.4% *	9.1%	-8.7%
RR Mileage excl Auto	81,836	5.3%	5.8%	-0.5%
Private excl Autorack	1,367,248	88.3%	76.2%	12.1%
Autorack	93,137	6.0%	8.9%	-2.9%
Total	1,548,853	100.0%	100.0%	
	ok			

from Sch. 414

Car Hire, Adjusted to eliminate negative numbers

RR Time excl Autork	6,632	0.4%	9.1%	-8.7%
RR Mileage excl Auto	81,836	5.3%	5.8%	-0.5%
Private excl Autorack	1,367,248	88.3%	76.2%	12.1%
Autorack	93,137	6.0%	8.9%	-2.9%
Total	1,548,853	100.0%	100.0%	

* The railroad that caused the big change in weights for Railroad Time excluding Autoracks said the cause was related to the impact of the Tax Cuts and Jobs Act on affiliates.

Note: These numbers are all rounded to 3 digits after the decimal or 1 digit after the decimal for a percentage. In the event that the rounded percentages do not sum to 100.0%, the number that is closest to rounding in the other direction will be changed to force a 100.0% total. The number is identified by a **bold** font.

Railroad Retirement and Medicare Benchmark for U.S.

Inputs:

RRB Earnings Distribution Year	2016	RR Retirement Tier I Maximum Taxable Earnings for 2017	\$127,200
Wage Statistics Year	2017	RR Retirement Tier II Maximum Taxable Earnings for 2017	\$94,500
Employees Receiving Pay	150,320	Medicare Maximum Taxable Earnings for 2017	no limit
		Tier I Employer Tax Rate for 2017	6.20%
		Tier II Employer Tax Rate for 2017	13.10%
		Medicare Employer Tax Rate for 2017	1.45%

(Info Only)

USA	Taxable Rate	Update Factor	RR Ret. Tax Paid	Hourly Rate	
2016	\$39.231				
2017	\$39.599	1.00938	\$607,976,250	\$8.514	Hourly rate from Supplements spreadsheet
					607984460

Railroad Retirement and Medicare Benchmark for U.S.

From 2016 RRB Earnings Distribution			Quarterly Average for Benchmark Year 2017 (using updated 2016 Earnings Distribution with data for 2017)								
Earnings Groups	Avg Annual Earnings	% of Total Employees	Employees Receivg. Pay	Avg. Annual Earnings	Avg. Qtrly. Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)		
									Tier I	Tier II	Medicare
\$0 - 41,699	\$30,262	2.166	3,256	\$30,546	\$7,636	7,636	\$7,636	\$7,636	\$24,863,811	\$24,863,811	\$24,863,811
41,700 - 43,699	\$42,903	0.591	888	\$43,305	10,826	10,826	10,826	10,826	9,618,044	9,618,044	9,618,044
43,700 - 45,699	\$44,763	0.935	1,405	\$45,183	11,296	11,296	11,296	11,296	15,876,048	15,876,048	15,876,048
45,700 - 47,699	\$46,647	1.379	2,073	\$47,085	11,771	11,771	11,771	11,771	24,400,549	24,400,549	24,400,549
47,700 - 49,699	\$48,750	1.034	1,554	\$49,207	12,302	12,302	12,302	12,302	19,120,832	19,120,832	19,120,832
49,700 - 51,699	\$50,730	2.068	3,109	\$51,206	12,801	12,801	12,801	12,801	39,794,863	39,794,863	39,794,863
51,700 - 53,699	\$52,751	1.379	2,073	\$53,246	13,311	13,311	13,311	13,311	27,593,487	27,593,487	27,593,487
53,700 - 55,699	\$54,804	1.723	2,590	\$55,318	13,830	13,830	13,830	13,830	35,818,645	35,818,645	35,818,645
55,700 - 57,699	\$56,791	2.806	4,218	\$57,324	14,331	14,331	14,331	14,331	60,447,563	60,447,563	60,447,563
57,700 - 59,699	\$58,815	3.299	4,959	\$59,367	14,842	14,842	14,842	14,842	73,600,715	73,600,715	73,600,715
59,700 - 61,699	\$60,675	4.628	6,957	\$61,244	15,311	15,311	15,311	15,311	106,515,976	106,515,976	106,515,976
61,700 - 63,699	\$62,661	4.628	6,957	\$63,249	15,812	15,812	15,812	15,812	110,002,432	110,002,432	110,002,432
63,700 - 65,699	\$64,649	4.825	7,253	\$65,255	16,314	16,314	16,314	16,314	118,323,429	118,323,429	118,323,429
65,700 - 67,699	\$66,673	4.530	6,809	\$67,298	16,825	16,825	16,825	16,825	114,567,072	114,567,072	114,567,072
67,700 - 69,699	\$68,534	3.447	5,182	\$69,177	17,294	17,294	17,294	17,294	89,610,516	89,610,516	89,610,516
69,700 - 71,699	\$70,724	3.988	5,995	\$71,387	17,847	17,847	17,847	17,847	106,987,633	106,987,633	106,987,633
71,700 - 73,699	\$72,852	2.905	4,367	\$73,535	18,384	18,384	18,384	18,384	80,278,497	80,278,497	80,278,497
73,700 - 75,699	\$74,718	2.462	3,701	\$75,419	18,855	18,855	18,855	18,855	69,779,026	69,779,026	69,779,026
75,700 - 77,699	\$76,600	3.644	5,478	\$77,319	19,330	19,330	19,330	19,330	105,881,175	105,881,175	105,881,175
77,700 - 79,699	\$78,723	3.151	4,737	\$79,461	19,865	19,865	19,865	19,865	94,093,940	94,093,940	94,093,940
79,700 - 81,699	\$80,708	3.299	4,959	\$81,465	20,366	20,366	20,366	20,366	100,997,475	100,997,475	100,997,475
81,700 - 83,699	\$82,622	2.757	4,144	\$83,397	20,849	20,849	20,849	20,849	86,406,037	86,406,037	86,406,037
83,700 - 85,699	\$84,690	2.314	3,478	\$85,484	21,371	21,371	21,371	21,371	74,337,355	74,337,355	74,337,355
85,700 - 87,699	\$86,732	2.905	4,367	\$87,546	21,886	21,886	21,886	21,886	95,573,417	95,573,417	95,573,417
87,700 - 89,699	\$88,666	3.348	5,033	\$89,498	22,374	22,374	22,374	22,374	112,604,094	112,604,094	112,604,094
89,700 - 91,699	\$90,699	2.708	4,071	\$91,550	22,887	22,887	22,887	22,887	93,167,142	93,167,142	93,167,142
91,700 - 93,699	\$92,738	1.526	2,294	\$93,608	23,402	23,402	23,402	23,402	53,681,405	53,681,405	53,681,405
93,700 - 95,699	\$94,689	1.822	2,739	\$95,577	23,894	23,894	23,625	23,894	65,442,445	64,704,868	65,442,445
95,700 - 97,699	\$96,618	1.428	2,147	\$97,524	24,381	24,381	23,625	24,381	52,335,679	50,712,707	52,335,679
97,700 - 99,699	\$98,600	1.822	2,739	\$99,525	24,881	24,881	23,625	24,881	68,145,456	64,704,868	68,145,456
99,700 - 101,699	\$100,896	1.871	2,812	\$101,842	25,461	25,461	23,625	25,461	71,607,639	66,445,010	71,607,639
101,700 - 103,699	\$102,684	1.526	2,294	\$103,647	25,912	25,912	23,625	25,912	59,438,649	54,192,991	59,438,649
103,700 - 105,699	\$104,566	1.231	1,850	\$105,547	26,387	26,387	23,625	26,387	48,827,014	43,716,626	48,827,014
105,700 - 107,699	\$106,714	1.625	2,443	\$107,715	26,929	26,929	23,625	26,929	65,778,866	57,708,788	65,778,866
107,700 - 109,699	\$108,748	1.329	1,998	\$109,768	27,442	27,442	23,625	27,442	54,822,379	47,196,910	54,822,379
109,700 - 111,699	\$110,767	0.788	1,185	\$111,806	27,952	27,952	23,625	27,952	33,109,165	27,984,323	33,109,165
111,700 - 113,699	\$112,607	0.886	1,332	\$113,663	28,416	28,416	23,625	28,416	37,845,193	31,464,607	37,845,193
113,700 - 115,699	\$114,747	1.034	1,554	\$115,823	28,956	28,956	23,625	28,956	45,006,319	36,720,545	45,006,319
\$115,700 - over	\$168,229	10.193	15,322	\$169,807	42,452	31,800	23,625	42,452	487,243,340	361,985,028	650,450,877
TOTAL		100.000	150,320								
									Total Taxable Earn'gs.		
									\$3,033,543,323		
									Employer Tax Rate		
									6.20%		
									Employer Payment		
									\$188,079,686		
									Total Tier I & II & Medicare		
									\$373,543,677		
									\$46,352,887		
									\$607,976,250		

RRB 2016 EARNINGS DATA

Annual Salary Range	Number of Employees	Gross Salary	Average Salary (Group)	Group Employment % Total Employment	Cumulative Employees	Cumulative Salary	Average Salary (Cumulative)	Cumulative % Total Employment
\$ 0 TO \$41,699	44	\$1,331,545	\$30,262	2.166	44	\$1,331,545	\$30,262	2.166
\$41,700 TO \$43,699	12	\$514,837	\$42,903	0.591	56	\$1,846,382	\$32,971	2.757
\$43,700 TO \$45,699	19	\$850,502	\$44,763	0.935	75	\$2,696,884	\$35,958	3.693
\$45,700 TO \$47,699	28	\$1,306,105	\$46,647	1.379	103	\$4,002,989	\$38,864	5.071
\$47,700 TO \$49,699	21	\$1,023,743	\$48,750	1.034	124	\$5,026,732	\$40,538	6.105
\$49,700 TO \$51,699	42	\$2,130,666	\$50,730	2.068	166	\$7,157,398	\$43,117	8.173
\$51,700 TO \$53,699	28	\$1,477,021	\$52,751	1.379	194	\$8,634,419	\$44,507	9.552
\$53,700 TO \$55,699	35	\$1,918,140	\$54,804	1.723	229	\$10,552,559	\$46,081	11.275
\$55,700 TO \$57,699	57	\$3,237,115	\$56,791	2.806	286	\$13,789,674	\$48,216	14.082
\$57,700 TO \$59,699	67	\$3,940,623	\$58,815	3.299	353	\$17,730,297	\$50,227	17.381
\$59,700 TO \$61,699	94	\$5,703,474	\$60,675	4.628	447	\$23,433,771	\$52,425	22.009
\$61,700 TO \$63,699	94	\$5,890,144	\$62,661	4.628	541	\$29,323,915	\$54,203	26.637
\$63,700 TO \$65,699	98	\$6,335,627	\$64,649	4.825	639	\$35,659,542	\$55,805	31.462
\$65,700 TO \$67,699	92	\$6,133,904	\$66,673	4.530	731	\$41,793,446	\$57,173	35.992
\$67,700 TO \$69,699	70	\$4,797,398	\$68,534	3.447	801	\$46,590,844	\$58,166	39.439
\$69,700 TO \$71,699	81	\$5,728,655	\$70,724	3.988	882	\$52,319,499	\$59,319	43.427
\$71,700 TO \$73,699	59	\$4,298,287	\$72,852	2.905	941	\$56,617,786	\$60,168	46.332
\$73,700 TO \$75,699	50	\$3,735,917	\$74,718	2.462	991	\$60,353,703	\$60,902	48.794
\$75,700 TO \$77,699	74	\$5,668,367	\$76,600	3.644	1,065	\$66,022,070	\$61,993	52.437
\$77,700 TO \$79,699	64	\$5,038,277	\$78,723	3.151	1,129	\$71,060,347	\$62,941	55.588
\$79,700 TO \$81,699	67	\$5,407,417	\$80,708	3.299	1,196	\$76,467,764	\$63,936	58.887
\$81,700 TO \$83,699	56	\$4,626,806	\$82,622	2.757	1,252	\$81,094,570	\$64,772	61.645
\$83,700 TO \$85,699	47	\$3,980,452	\$84,690	2.314	1,299	\$85,075,022	\$65,493	63.959
\$85,700 TO \$87,699	59	\$5,117,187	\$86,732	2.905	1,358	\$90,192,209	\$66,415	66.864
\$87,700 TO \$89,699	68	\$6,029,305	\$88,666	3.348	1,426	\$96,221,514	\$67,477	70.212
\$89,700 TO \$91,699	55	\$4,988,463	\$90,699	2.708	1,481	\$101,209,977	\$68,339	72.920
\$91,700 TO \$93,699	31	\$2,874,891	\$92,738	1.526	1,512	\$104,084,868	\$68,839	74.446
\$93,700 TO \$95,699	37	\$3,503,477	\$94,689	1.822	1,549	\$107,588,345	\$69,457	76.268

RRB 2016 EARNINGS DATA

Annual Salary Range	Number of Employees	Gross Salary	Average Salary (Group)	Group Employment % Total Employment	Cumulative Employees	Cumulative Salary	Average Salary (Cumulative)	Cumulative % Total Employment
\$95,700 TO \$97,699	29	\$2,801,918	\$96,618	1.428	1,578	\$110,390,263	\$69,956	77.696
\$97,700 TO \$99,699	37	\$3,648,195	\$98,600	1.822	1,615	\$114,038,458	\$70,612	79.517
\$99,700 TO \$101,699	38	\$3,834,057	\$100896	1.871	1,653	\$117,872,515	\$71,308	81.388
\$101,700 TO \$103,699	31	\$3,183,203	\$102684	1.526	1,684	\$121,055,718	\$71,886	82.915
\$103,700 TO \$105,699	25	\$2,614,155	\$104566	1.231	1,709	\$123,669,873	\$72,364	84.146
\$105,700 TO \$107,699	33	\$3,521,557	\$106714	1.625	1,742	\$127,191,430	\$73,015	85.771
\$107,700 TO \$109,699	27	\$2,936,197	\$108748	1.329	1,769	\$130,127,627	\$73,560	87.100
\$109,700 TO \$111,699	16	\$1,772,270	\$110767	0.788	1,785	\$131,899,897	\$73,893	87.888
\$111,700 TO \$113,699	18	\$2,026,925	\$112607	0.886	1,803	\$133,926,822	\$74,280	88.774
\$113,700 TO \$115,699	21	\$2,409,680	\$114747	1.034	1,824	\$136,336,502	\$74,746	89.808
\$115,700 AND OVER	207	\$34,823,503	\$168229	10.192	2,031	\$171,160,005	\$84,274	100.000
TOTAL	2,031	\$171,160,005	\$84,274	100.000	2,031	\$171,160,005	\$84,274	100.000

2017 RR Retirement Benchmarking

From "Wage Statistics"

	U.S.
2017 ST Comp. Incl. Lump Sums	\$9,878,895,307
2017 PFTNW	\$1,885,272,236
TOTAL	\$11,764,167,543
Pre Tax Emp H&W Cost Sharing	\$391,035,383
ST Hours Paid For	287,199,489
ST Hourly Rate	\$34.397
PFTNW Hourly Rate	\$6.564
ST + PFTNW Hourly Rate	\$40.961
Pre-Tax Contributions	(\$1.362)
Taxable Rate	\$39.599

Figures are from Wage Statistics, Year 2017, and WF Form.

The hourly rate is used both in Railroad Retirement and Unemployment Insurance.

Pre-Tax Employee H&W Cost Sharing is from the railroads in the new WF.

2016 RR Retirement Benchmarking

From "Wage Statistics"

	U.S.
2016 ST Comp. Incl. Lump Sums	\$10,050,953,285
2016 PFTNW	<u>\$1,921,579,138</u>
TOTAL	\$11,972,532,423
Pre Tax Emp H&W Cost Sharing	<u>\$378,365,452</u>
ST Hours Paid For	295,539,752
ST Hourly Rate	\$34.009
PFTNW Hourly Rate	\$6.502
ST + PFTNW Hourly Rate	\$40.511
Pre-Tax Contributions	(\$1.280)
Taxable Rate	\$39.231

Figures are from Wage Statistics, Year 2016, and WF Form.

The hourly rate is used both in Railroad Retirement and Unemployment Insurance.

Pre-Tax Employee H&W Cost Sharing is from the railroads in the new WF.

Restated Hourly Rate to New Wage Rate Benchmark

U.S.	STHR	+ PFTNW	= Wages	Lump Sums	Back Pay	Other	Adjusted Wages	Pre-Tax Wages	Taxable Wages
1Q/18	\$34.578	\$6.728	\$41.306	\$0.322	\$0.633	\$0.140	\$42.401	-\$1.362	\$41.039
2Q/18	\$34.700	\$6.746	\$41.446	\$0.401	\$0.822	\$0.140	\$42.809	-\$1.362	\$41.447
3Q/18	\$35.524	\$6.933	\$42.457	\$0.401	\$1.268	\$0.182	\$44.308	-\$1.362	\$42.946

1Q, 2Q & 3Q STHR & PFTNW (adjustments included) are from the SUMMARY_restated.xlsx in the Labor Restatement folder.

Adjustments are the same ones that went into the filings but restated to use new Wage Statistics.

See RCAFlumpsum_restated.xlsx, RCAFbackpay_restated.xlsx, BNSFProfitSharing_restated.xlsx, and TaxableRate_restated.xlsx.

The Taxable Wages (hourly rate) is used both in Railroad Retirement and Unemployment Insurance.