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John T. Gray
Senior Vice President - Policy & Economics

March 5, 2021

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

This submission is the AAR forecast of the second quarter 2021 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2021-2) *Quarterly Rail Cost Adjustment Factor*. The versions of RCAF-related indices covered in this filing are: the All-Inclusive Index (initiated in the second quarter of 1985), the Unadjusted RCAF (produced since October 1982), the Adjusted RCAF (first published in the second quarter of 1989), and the RCAF-5 (created by the STB in its Ex Parte No. 290 (Sub-No. 7) decision served October 3, 1996). The table below summarizes the second quarter 2021 results and compares to the previous quarter. Both quarters are shown on a 4Q\2017=100 base.

	<u>2021Q1</u>	<u>2021Q2</u>	<u>% Change</u>
All-Inclusive Index	102.7	106.7	3.9
Preliminary RCAF	1.027	1.067	3.9
Forecast Error Adjustment	0.013	-0.008	
RCAF (Unadjusted)	1.040	1.059	1.8
Productivity Adjustment Factor	2.3943	2.3991	
RCAF (Adjusted)	0.434	0.441	1.6
PAF-5	2.5343	2.5406	
RCAF-5	0.410	0.417	1.7

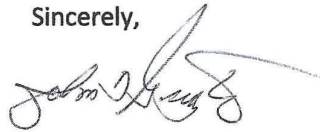
Page 2

March 5, 2021

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 provided to Mr. Ramirez's Data Collection and Auditing Team. All work papers are available for STB inspection. Questions should be directed to me or Tiffany Placker (202 639-2381) of this office.

Sincerely,

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

John T. Gray

Attachments

**Second Quarter 2021
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2021-2)

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

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

March 5, 2021

Table of Contents

Subject	Page
Introduction	1
Index Weights	2
All-Inclusive Index - Second Quarter 2021	3
Forecast vs. Actual All Inclusive Index - Fourth Quarter 2020	4
Productivity	5
Rail Cost Adjustment Factor - Second Quarter 2021	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 second quarter 2021. The Productivity adjustment decision, served February 19, 2021, has been utilized to update productivity adjustment factors listed on page 5 herein.

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 2019 (current) and 2018 (previous) weights are shown below. Weights calculated from 2018 data were used for the fourth quarter of 2019 through the third quarter of 2020. Beginning with the fourth quarter of 2020, weights calculated using 2019 data are used. The component with the biggest change in weight was Fuel, which decreased by 1.7 percentage points. Labor, Materials & Supplies, and Equipment Rents also decreased. The weight for Depreciation, Interest, and Other all increased by 0.9, 0.4, and 1.1 percentage points, respectively.

Weights for RCAF's All-Inclusive Index		
	2019	2018
Labor	32.6 %	33.0 %
Fuel	14.2	15.9
Materials & Supplies	4.9	5.1
Equipment Rents	5.2	5.3
Depreciation	15.9	15.0
Interest	2.5	2.1
Other	24.7	23.6
Total	100.0	100.0

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

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

All-Inclusive Index

Second Quarter 2021

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.

	2019 Weights	Forecast		Percent Change
		Previous 2021Q1	Current 2021Q2	
1. Labor	32.6%	448.9	446.6	-0.5 %
2. Fuel	14.2%	164.7	221.1	34.2
3. M&S	4.9%	264.9	275.0	3.8
4. Equipment Rents	5.2%	236.4	238.4	0.8
5. Depreciation	15.9%	226.2	226.5	0.1
6. Interest	2.5%	55.7	55.7	0.0
7. Other	24.7%	237.0	251.0	5.9
8. Weighted Average				
a. 1980 = 100		290.9	302.3	
b. 1980 = 100 (linked)		271.7	282.3 ¹	
c. 4Q17 = 100		102.7	106.7 ²	3.9

¹ Index80 = (Current Index / Previous Index) * the Previous Quarter Linked Index

$$= (302.3 / 290.9) \times 271.7$$

$$= 282.3$$

² To calculate the 4Q17 = 100 index:

$$\text{Index4Q17} = (\text{Current Linked Index} / 4\text{Q17 Basing Factor}) * 100$$

$$= 282.3 \text{ divided by } 264.5 \text{ times } 100$$

$$= 106.7$$

Indexes based on other periods:

$$4\text{Q12 based index} = 282.3 / 297.6 \times 100 = 94.9$$

$$4\text{Q07 based index} = 282.3 / 245.9 \times 100 = 114.8$$

$$4\text{Q02 based index} = 282.3 / 192.1 \times 100 = 147.0$$

$$4\text{Q97 based index} = 282.3 / 173.2 \times 100 = 163.0$$

$$4\text{Q92 based index} = 282.3 / 156.9 \times 100 = 179.9$$

Forecast vs. Actual All-Inclusive Index

Fourth Quarter 2020

Because of data availability, the forecast error adjustment has a two-quarter lag from each filing. As shown below, the fourth quarter actual index of 100.3 is 0.8 index points below the forecast value of 101.1. Therefore, the forecast error adjustment for second quarter 2021 is -0.8 index points.

	2019 Weights	Fourth Quarter 2020		Amt Difference
		Forecast	Actual	
1. Labor	32.6%	437.1	437.1	
2. Fuel	14.2%	171.2	154.9	
3. M&S	4.9%	258.8	258.8	
4. Equipment Rents ¹	5.2%	234.1	236.1	
5. Depreciation	15.9%	226.1	226.2	
6. Interest	2.5%	55.7	55.7	
7. Other	24.7%	232.1	235.1	
8. Weighted Average				
a. 1980 = 100		286.3	284.9	
b. 1980 = 100 (linked)		267.4	265.3 ²	
c. 4Q17 = 100 ³		101.1	100.3	-0.8

Forecast error  **-0.8 index points**

Notes: New weights have been utilized. The standard linking procedure has been used to eliminate any changes to indexes that would be caused by updating weights. The Q3 unlinked weighted averages for the All-Inclusive Indexes (forecast and actual) and for Equipment Rents (forecast and actual) were recalculated using the new (2019) weights.

¹	2019 Weights	Fourth Quarter 2020	
		Forecast	Actual
Car-Hire	61.4%	215.9	216.3
Lease Rentals	38.6%	232.1	235.1
Weighted Average		222.2	223.6
Weighted Average (linked)		234.1	236.1

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

$$265.3 = 284.9 / 286.9 \times 267.2$$

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 19, 2021, the Surface Transportation Board served a decision which proposed to adopt 0.8 percent as the geometric average productivity change for the five most recent years available. Their five year rolling geometric average calculation added the year 2019 and removed the year 2014. The components of this average annual value are shown on the following table in ratio format – therefore, 1.008 is the same as an increase of 0.8 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			
2015 - 2019			
Year	Output Index (1)	Input Index (2)	Productivity Changes (3)
2015	0.913	0.972	0.939
2016	0.955	0.941	1.015
2017	1.045	0.992	1.053
2018	1.032	1.004	1.028
2019	0.968	0.961	1.007
Average			1.008
Previous Average (2014-2018)			1.010

Calculation of PAF and PAF-5				
For 2015-2019, use fourth root of avg. productivity change = 1.0020				
For 2014-2018, use fourth root of avg. productivity change = 1.0025				
Quarter	Year	PAF	PAF-5	
Q1	2021	2.3943	2.5343	2014-2018
Q2	2021	2.3991	2.5406	
Q3	2021	2.4039	2.5470	2015-2019
Q4	2021	2.4087	2.5534	
Q1	2022	2.4135	2.5585	

Rail Cost Adjustment Factor

Second Quarter 2021

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 2021Q1	Current 2021Q2	Percent Change
All-Inclusive Index ¹	102.7	106.7	3.9
Preliminary RCAF ²	1.027	1.067	3.9
Forecast Error Adjustment ³	0.013	-0.008	
RCAF (Unadjusted) ⁴	1.040	1.059	1.8
Productivity Adjustment Factor ⁵	2.3943	2.3991	
RCAF (Adjusted) ⁶	0.434	0.441	1.6
PAF-5 ⁷	2.5343	2.5406	
RCAF-5 ⁸	0.410	0.417	1.7

¹ See All-Inclusive Index on page 3.

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

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

⁴ Preliminary RCAF plus the forecast error adjustment.

⁵ See Productivity on page 5.

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

⁷ See Productivity on page 5.

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

Appendixes

Labor

Second Quarter 2021

The second quarter 2021 Labor Index is 0.5 percent lower than the previous quarter. A decrease in the lump sum rate and the Other (401k) rate contributed the most towards this decrease.

Wage Rate Index

The Wage Rate Index portion of the Labor Index decreased by 0.5%.

Wage Increases: There are no national or independent agreement wage increases currently scheduled for the second quarter.

Lump Sums: The second quarter lump sum rate fell 22.2 cents. Four amounts (three annual and one quarterly) were fully amortized and removed, but they were replaced by only three new amounts (two annual and one quarterly). One of the annual performance-based lump sums was quite a bit smaller than it was the prior year.

Back Pay: The back pay rate is unchanged this quarter. One small amount was fully amortized and removed, and it was replaced by a similarly small new amount.

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 second quarter rate is unchanged from the prior quarter.

Labor

Second Quarter 2021

Supplements Index

The Supplements Index decreased 0.5 percent due to a decrease in the Railroad Retirement rate and the Other (401k) rate.

Health & Welfare: The Health & Welfare rate is unchanged this quarter.

Railroad Retirement: The Railroad Retirement rate fell 0.4 percent due to lower taxable wages.

Unemployment Insurance: The Unemployment Insurance rate is unchanged this quarter.

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 second quarter rate is 34.5 percent (7 cents) lower than last quarter.

Labor Index Calculation

As shown in Table A-1 on the next page, the 0.5 percent decrease in the Wage Rate Index and the 0.5 percent decrease in the Supplements Index combined to cause the Labor Index to be 0.5 percent lower than the previous quarter. The linked second quarter 2021 Labor index is 446.6, which is 1.1 percent higher than one year ago.

Labor

Second Quarter 2021

Table A-1 Labor Index

	2021Q1	2021Q2	Change	
			Percent	Amount
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$44.476	\$44.476	0.0%	\$0.000
Adjustments:				
Lump Sum	0.349	0.127	-63.6%	-\$0.222
Back Pay	0.017	0.017	0.0%	\$0.000
Other	0.172	0.172	0.0%	\$0.000
Total Wages	<u>45.014</u>	<u>44.792</u>	-0.5%	-\$0.222
Health & Welfare Benefits	8.522	8.522	0.0%	\$0.000
RR Retirement & Medicare	9.054	9.022	-0.4%	-\$0.032
Unemployment Insurance	0.569	0.569	0.0%	\$0.000
Other	0.203	0.133	-34.5%	-\$0.070
Total Supplements	<u>\$18.348</u>	<u>\$18.246</u>	-0.6%	-\$0.102
Total Labor (as info only)	\$63.362	\$63.038		
Wage Index¹	385.2	383.3	-0.5%	
Supplements Index²	678.0	674.3	-0.5%	
Total labor Index, 2019 Weights ³	469.8	467.4		
Labor Index (linked)⁴	448.9	446.6	-0.5%	

¹ 1980 wage rate \$11.685

² 1980 supplements rate \$2.706

³ 2019 weights: wages, supplements 71.1% 28.9%

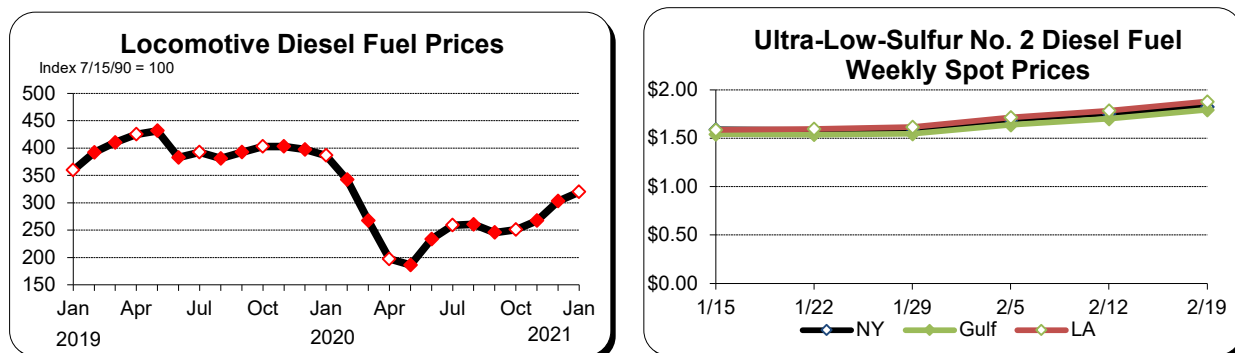
⁴ 2021Q2 linked Index = 2021Q1 linked x (2021Q2 / 2021Q1)
 = 448.9 x 467.4 / 469.8

Fuel

Second Quarter 2021

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 hit a low point in May 2020 but has, for the most part, risen in the months after. While average prices for locomotive diesel fuel are available only through January 2021, data through four weeks of February are available for related fuel types. According to the Energy Information Administration, the daily spot price as of February 22 for Ultra-Low-Sulfur Diesel Fuel* is an average of 20 percent higher than the average for January. The chart below (on left) shows the AAR's Monthly Locomotive Diesel Fuel Price Index through January 2021. The second chart (on right) shows recent spot prices for Ultra-Low-Sulfur No. 2 Diesel Fuel as reported by the Energy Information Administration.



Using information from the EIA, prices towards the end of February are higher than prices that actually occurred in January. Railroads that responded to the AAR's forecast survey expect prices to continue to increase by April (Q2) compared to prices that actually occurred for January (Q1). The second quarter 2021 forecast is 34.2 percent higher than the previous quarter forecast, and 12.1 percent higher than the prior quarter actual.

Forecast Fuel Index (1980 = 100)	221.1
Change from previous quarter forecast	34.2%
Change from previous quarter actual	12.1%

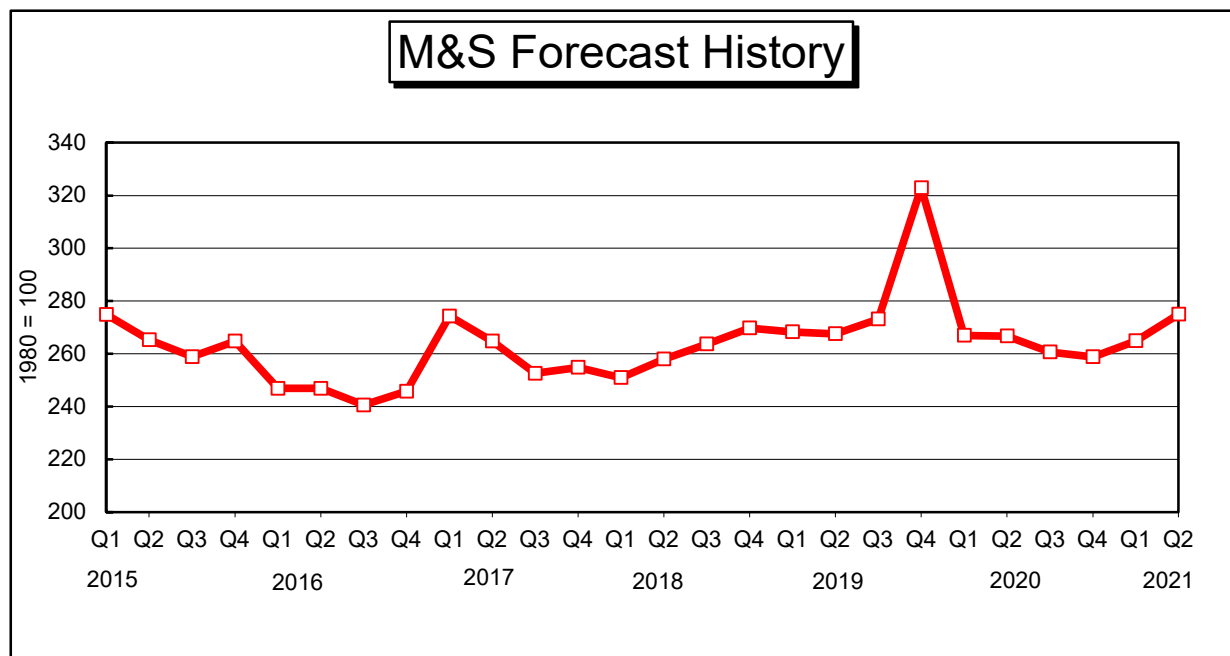
* Heating oil, Ultra-Low-Sulfur No. 2 Diesel Fuel, and locomotive diesel fuel are part of a group of closely related products, commonly labeled as distillates, that differ mostly by their sulfur content. Because of these similarities, these fuels are produced together and have similar pricing trends.

Materials & Supplies

Second Quarter 2021

The second quarter 2021 Materials & Supplies Index increased 3.8 percent from the previous quarter. Prices increased for Miscellaneous Products and Metal Products.

2021Q2	Materials & Supplies Index =	275.0
2021Q1	Materials & Supplies Index =	264.9
Difference		10.1 basis points or 3.8 %



Equipment Rents

Second Quarter 2021

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 second quarter Car Hire portion of the Index decreased 2.6 percent because of lower rates for privately owned cars and auto racks. A 5.9 percent increase for the projected PPI-LF (See Appendix G) used as a proxy for Lease Rentals, combined with the 2.6 percent decrease for Car Hire, caused the Equipment Rents Index to rise 0.8 percent.

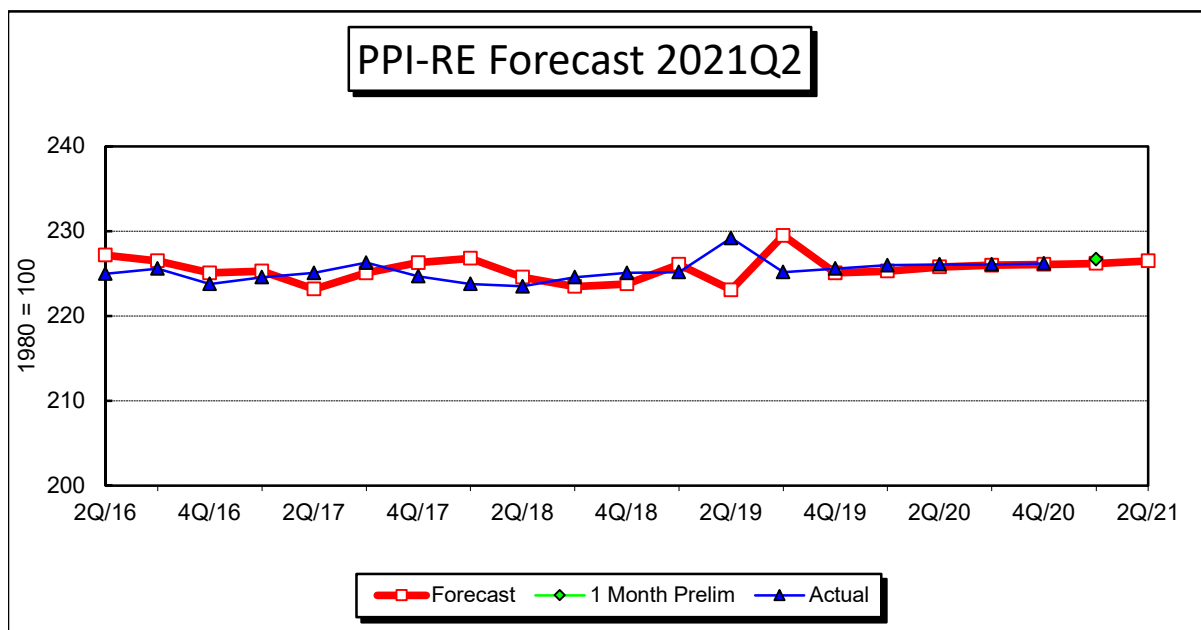
	2019			Percent
	Weight	2021Q1	2021Q2	Change
Car Hire	61.4%	216.5	210.8	-2.6 %
Lease Rentals	38.6%	237.0	251.0	5.9
Weighted Average		224.4	226.3	0.8
Weighted Average (Linked)		236.4	238.4	0.8

Depreciation

Second Quarter 2021

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 0.1% higher than the previous quarter's forecast.

Forecast of Depreciation Index (1982=100)	204.8
Forecast of Depreciation Index (1980=100)	226.5
Change from previous quarter forecast	0.1% = 0.13%
Change from actual first month of previous quarter	0.0% = 0.00%
Change from same quarter of prior year (actual)	0.2%



Depreciation

Second Quarter 2021

PPI RAILROAD EQUIPMENT

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 0.45 and for Box-Jenkins was 1.16.
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

Exponential smoothing: No trend, Additive seasonality
NA(0.697, 0.331)

Component	Smoothing Wgt		Final Value
Level	0.6968		205
Seasonal	0.3309		
Seasonal Indexes			
Jan - Mar	-0.129	0.2636	0.2833
Apr - Jun	-0.1961	-0.2191	0.0025
Jul - Sep	0.07767	0.4111	-0.1094
Oct - Dec	0.1071	-0.2844	-0.2073

Within-Sample Statistics

Sample size	72	No. parameters	2
Mean	203.17	Std. deviation	1.34
R-square	0.56	Adj. R-square	0.55
Durbin-Watson	1.91	Ljung-Box(18)	18.6 P=0.58
Forecast error	0.9	BIC	0.94
MAPE	0.29	SMAPE	0.29
RMSE	0.89	MAD	0.59
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2020-Aug	204.4
2020-Sep	204.4
2020-Oct	204.4
2020-Nov	204.4
2020-Dec	204.6
2021-Jan	204.9

Forecasted Values

2.5 Lower	Forecast	97.5 Upper	
Date	2.5 Lower	Forecast	97.5 Upper
2021-Feb	203.389	205.232	207.076
2021-Mar	203.005	205.252	207.499
2021-Apr	202.185	204.773	207.361
2021-May	201.860	204.750	207.639
2021-Jun	201.809	204.971	208.133
QTR AVG	201.951	204.831	207.711

Interest

Second Quarter 2021

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 2019 data, and was updated in the Q4 filing submitted on September 4, 2020. The Interest Index based on 2019 decreased to 55.7 from 57.2 in 2018, and is the lowest in recent history.

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

2019	Interest Rate	4.37%
1980	Interest Rate	7.85%
2021Q2	Interest Index	55.7
2021Q1	Interest Index	55.7
	Percent Change	0.0%

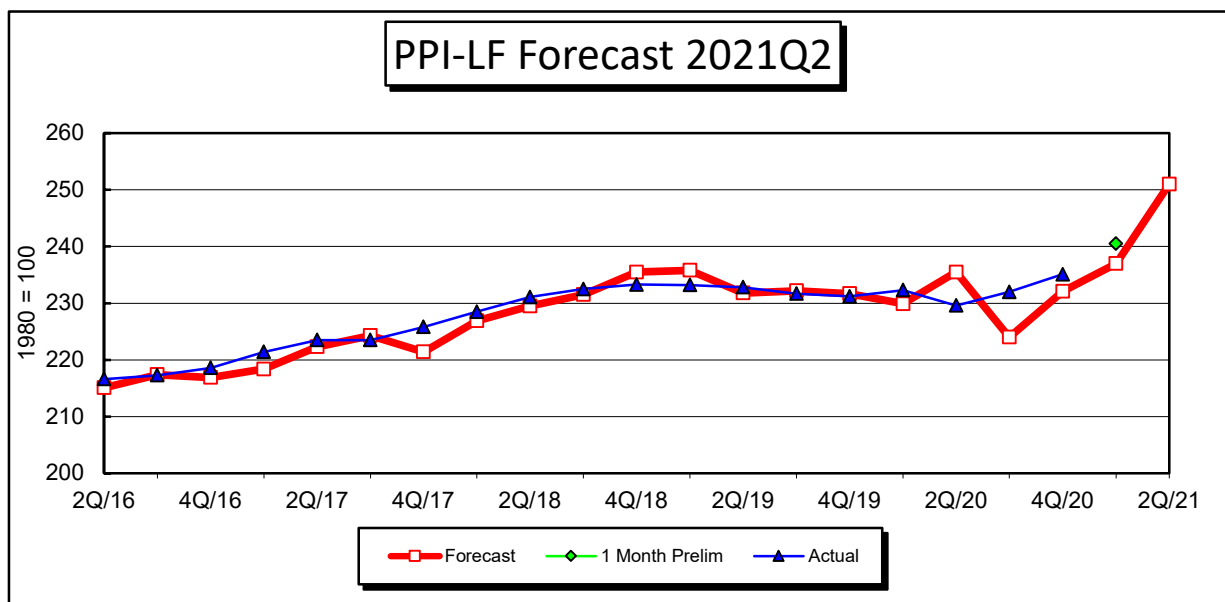
Other Expenses

Second Quarter 2021

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

Like the PPI-RE, the PPI-LF is forecast using an ARIMA process on 6 years of monthly data (a sample size of 72) with the most recent available monthly data being the first month of the quarter prior to the forecast quarter. For a first quarter forecast, the most recent month of data available would be for October of the prior year. For a second quarter forecast, January would normally be the most recent month available. April and July would be the most recent months available for third and fourth quarter forecasts, respectively. The output from the forecast model is shown on page 2 of this appendix for 1982=100. The figure forecast by the model is 5.9 percent higher than the prior quarter forecast.

Forecast of Other Expense Index (1982=100)	223.9
Forecast of Other Expense Index (1980=100)	251.0
Change from previous quarter forecast	5.9%
Change from actual first month of previous quarter	0.0%
Change from same quarter of prior year (actual)	9.3%



Other Expenses

Second Quarter 2021

PPI INDUSTRIAL COMMODITIES LESS FUEL AND RELATED PRODUCTS AND POWER

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 3.68 and for Box-Jenkins was 3.53.
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(0, 2, 0)*(1, 0, 0)

Term	Coefficient	Std. Error	t-Statistic	Significance
A[12]	0.7752	0.1233	6.286	1

Within-Sample Statistics

Sample size	72	No. parameters	1
Mean	201.61	Std. deviation	6.3
R-square	0.99	Adj. R-square	0.99
Durbin-Watson	1.95	Ljung-Box(18)	21.2 P=0.73
Forecast error	0.52	BIC	0.53
MAPE	0.18	SMAPE	0.18
RMSE	0.52	MAD	0.37
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2020-Aug	207.0
2020-Sep	208.1
2020-Oct	208.8
2020-Nov	209.2
2020-Dec	211.0
2021-Jan	214.5

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2021-Feb	216.200	217.225	218.25
2021-Mar	217.735	220.027	222.319
2021-Apr	217.521	221.357	225.192
2021-May	217.924	223.539	229.153
2021-Jun	219.204	226.806	234.408
QTR AVG	218.216	223.901	229.584

Railroad and Union Abbreviations

Second Quarter 2021

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 2021 Q2 RCAF

March 5, 2021

- 1 . Index Calculation Spreadsheet (index_calc.xlsx, 2 pages)
- 2 . Summary of ST and PFTNW Hourly Rates (Summary.xlsx)
- 3 . RCAF Taxable Wages adjustment calculation (TaxableRate.xlsx)
- 4 . National Contracts spreadsheet, 2 sections (2 and 5 pages)
- 5 . Wall Street Journal - 13 week Treasury Bill Rate from recent auction (a.k.a. 3-Mo. T-Bill)
- 6 . 2021/Q2 RCAF Lump Sum Amortization summary, public version (1 page)
- 7 . 2021/Q2 RCAF Back Pay Amortization summary, public version (1 page)
- 8 . Health & Welfare worksheet (1 page)
- 9 . Railroad Retirement spreadsheet (5 pages)
- 10 . Unemployment Insurance Tax worksheet (1 page)
- 11 . 2-page SAS run for 2021 Q2 Unemployment Insurance Tax
- 12 . 2 pages from EIA including spot prices for various distillates
- 13 . Summary of Materials & Supplies - "U.S. Summary by Composition Category" (1 page)
- 14 . RCAF Car Hire Forecast Spreadsheet for Equipment Rents (2 pages) plus source data page
- 15 . 6 pages of PPI-RE for Depreciation including graph page, input/output, and BLS source data
- 16 . 6 pages of PPI-LF for Other (and Lease Rentals) incl. graph page, input/output, BLS source data
- 17 . Forecast Error calc. and workpapers (10 pages: calc, fuel, 3 car hire, 2 deprec, 2 other, actual)

RCAF All-Inclusive Index's Labor Index Based on 2019 Benchmarks

	19 Wts.	3Q/20	3Q/20 Rebenched As Info Only	% Chg	4Q/20	% Chg	1Q/21	% Chg	2Q/21	% Chg	3Q/21	% Chg
Straight Time		\$37.225	\$37.182	-0.1%	\$37.182	-0.1%	\$37.188	0.0%	\$37.188	0.0%		--
PFTNW		\$7.232	\$7.286	0.7%	\$7.286	0.7%	\$7.288	0.0%	\$7.288	0.0%		--
Total		\$44.457	\$44.468	0.0%	\$44.468	0.0%	\$44.476	0.0%	\$44.476	0.0%	\$0.000	--
Adjustments												
Lump Sum		\$0.333	\$0.350		\$0.350		\$0.349		\$0.127			
Back Pay		\$0.000	\$0.000		\$0.000		\$0.017		\$0.017			
Other		\$0.164	\$0.172		\$0.172		\$0.172		\$0.172			
Total Wages		\$44.954	\$44.990	0.1%	\$44.990	0.1%	\$45.014	0.1%	\$44.792	-0.5%	\$0.000	--
Pre-Tax Reduction		(\$1.382)	(\$1.394)		(\$1.394)		(\$1.394)		(\$1.395)			
Taxable Wages		\$43.572	\$43.596		\$43.596		\$43.620		\$43.397		\$0.000	
H & W		\$8.078	\$8.030	-0.6%	\$8.030	-0.6%	\$8.522	6.1%	\$8.522	0.0%		--
RR Ret & Medicare		\$9.290	\$8.945	-3.7%	\$8.945	-3.7%	\$9.054	1.2%	\$9.022	-0.4%		--
Unemp. Insurance		\$0.097	\$0.096	-1.0%	\$0.096	-1.0%	\$0.569	492.7%	\$0.569	0.0%		--
Other		\$0.328	\$0.345	5.2%	\$0.137	-58.2%	\$0.203	48.2%	\$0.133	-34.5%		--
Total		\$17.793	\$17.416	-2.1%	\$17.208	-3.3%	\$18.348	6.6%	\$18.246	-0.6%	\$0.000	--
Adjustments												
Total Supplements		\$17.793	\$17.416	-2.1%	\$17.208	-3.3%	\$18.348	6.6%	\$18.246	-0.6%	\$0.000	--
Total Labor		\$62.747	\$62.406	-0.5%	\$62.198	-0.9%	\$63.362	1.9%	\$63.038	-0.5%	\$0.000	--
Wage Rate Index	0.7110	384.7	385.0	0.1%	385.0	0.1%	385.2	0.1%	383.3	-0.5%	0.0	--
Supplements Index	0.2890	657.5	643.6	-2.1%	635.9	-3.3%	678.0	6.6%	674.3	-0.5%	0.0	--
Total Labor Index '18 Wts.		463.8										
Total Labor Index '19 Wts.		463.5	459.7	-0.8%	457.5	-1.3%	469.8	2.7%	467.4	-0.5%	0.0	--
Labor Index (Linked)		442.8			437.1	-1.3%	448.9	2.7%	446.6	-0.5%	0.0	-100.0%

All Inclusive Index and RCAF using 2019 Benchmarks and Weights

	19 Wts.	3Q/20	19 Wts. 3Q/20	% Chg	4Q/20	% Chg	1Q/21	% Chg	2Q/21	% Chg	3Q/21	% Chg
Labor	0.326	442.80	442.8	0.0%	437.1	-1.3%	448.9	2.7%	446.6	-0.5%	0.0	-100.0%
Fuel	0.142	142.80	142.8	0.0%	171.2	19.9%	164.7	-3.8%	221.1	34.2%		--
M&S	0.049	260.70	260.7	0.0%	258.8	-0.7%	264.9	2.4%	275.0	3.8%		--
Equip. Rents	0.052	235.00	235.0	0.0%	234.1	-0.4%	236.4	1.0%	238.4	0.8%	0.0	-100.0%
Depreciation	0.159	226.00	226.0	0.0%	226.1	0.0%	226.2	0.0%	226.5	0.1%		--
Interest	0.025	57.20	57.2	0.0%	55.7	-2.6%	55.7	0.0%	55.7	0.0%	55.7	0.0%
Other	0.247	224.00	224.0	0.0%	232.1	3.6%	237.0	2.1%	251.0	5.9%		--
Weighted Avg.	1.000	282.50	282.3	-0.1%	286.3	1.4%	290.9	1.6%	302.3	3.9%	1.4	-99.5%
Linked		263.70			267.4	1.4%	271.7	1.6%	282.3	3.9%	1.3	-99.5%
Basing Factor												
10/1/80 basis	102.7	256.8			260.4	1.4%	264.6	1.6%	274.9	3.9%	1.3	-99.5%
10/1/82	120.9	218.1			221.2	1.4%	224.7	1.6%	233.5	3.9%	1.1	-99.5%
4Q/87	132.2	199.5			202.3	1.4%	205.5	1.6%	213.5	3.9%	1.0	-99.5%
4Q/92	156.9	168.1			170.4	1.4%	173.2	1.6%	179.9	3.9%	0.8	-99.6%
4Q/97	173.2	152.3			154.4	1.4%	156.9	1.6%	163.0	3.9%	0.8	-99.5%
4Q/02	192.1	137.3			139.2	1.4%	141.4	1.6%	147.0	4.0%	0.7	-99.5%
4Q/07	245.9	107.2			108.7	1.4%	110.5	1.7%	114.8	3.9%	0.5	-99.6%
4Q/12	297.6	88.6			89.9	1.5%	91.3	1.6%	94.9	3.9%	0.4	-99.6%
4Q/17 basis	264.5	99.7			101.1	1.4%	102.7	1.6%	106.7	3.9%	0.5	-99.5%
Car Hire	0.614	222.60	222.6	0.0%	215.9	-3.0%	216.5	0.3%	210.8	-2.6%		--
Lease Rents	0.386	224.00	224.0	0.0%	232.1	3.6%	237.0	2.1%	251.0	5.9%	0.0	--
Weighted Avg Eq Rents		223.20	223.1	0.0%	222.2	-0.4%	224.4	1.0%	226.3	0.8%	0.0	--
Linked Equipment Rents		235.00			234.1	-0.4%	236.4	1.0%	238.4	0.8%	0.0	-100.0%
Preliminary RCAF		0.997			1.011	1.40%	1.027	1.6%	1.067	3.9%	0.005	-99.5%
Forecast Error Adj.		(0.008)			(0.070)		0.013		(0.008)			
RCAF Unadjusted		0.989			0.941	-4.85%	1.040	10.5%	1.059	1.8%	0.005	-99.5%
PAF		2.3823			2.3883	0.25%	2.3943	0.25%	2.3991	0.20%		--
RCAF Adjusted		0.415			0.394	-5.06%	0.434	10.2%	0.441	1.6%	#DIV/0!	--
PAF-5		2.5250			2.5280	0.12%	2.5343	0.25%	2.5406	0.25%		--
RCAF-5		0.392			0.372	-5.10%	0.410	10.2%	0.417	1.7%	#DIV/0!	--

Hourly Rate for 2021 Q2

Straight Time and Time Paid For But Not Worked

2021Q2 Straight Time Hourly Rate (from national spreadsheet)	\$37.175
No change	

Adjustments to 2019 base:

Added 2020 Q1

Miscellaneous Independents	Non-Union GWI	0.006
Soo Corp.	3 GWIs but rounds to zero	0.000

Added 2020 Q2

Miscellaneous Independents	nothing	0.000
Soo Corp.	nothing	0.000

Added 2020 Q3

Miscellaneous Independents	nothing	0.000
Soo Corp.	Four GWIs	0.001

Added 2020 Q4

Miscellaneous Independents	Nothing	0.000
Soo Corp.	4 GWIs but rounds to zero	0.000

Added 2021 Q1

Miscellaneous Independents	Nothing	0.000
Soo Corp.	1 new agreement and a few GWIs	0.006

Added 2021 Q2

Miscellaneous Independents	Nothing	0.000
Soo Corp.	Nothing	0.000

Adjusted STHR Total	\$37.188
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Pay For Time Not Worked

PFTNW (from national spreadsheet)					\$7.285
Ratio Adj STHR to Nat STHR	37.188	/	37.175	=	1.00035

Adjusted Pay For Time Not Worked	\$7.288
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Adjusted STHR + Adjusted Pay For Time Not Worked	\$44.476
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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.

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 2Q/2021

U.S. ST Hours = 271,399,487
Wage Statistics are for 2019

Union Group	Employees	Mo. Rate	Annual \$
National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,615	(\$228.89)	(\$4,435,888.20)
National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	22,803	(\$228.89)	(\$62,632,544.04)
National BMWE (All except SOO, DME, DH)	21,373	(\$228.89)	(\$58,704,791.64)
National BRS (All except DME)	6,744	(\$228.89)	(\$18,523,609.92)
National IAM (BNSF, CSX, KCS, NS, SOO, UP)	6,226	(\$228.89)	(\$17,100,829.68)
National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	1,142	(\$228.89)	(\$3,136,708.56)
National IBEW (All except DME)	4,970	(\$228.89)	(\$13,650,999.60)
National NCFO (All except DME and WC)	2,057	(\$228.89)	(\$5,649,920.76)
National SMW (BNSF, CSX, KCS, NS, UP, IC)	808	(\$228.89)	(\$2,219,317.44)
National TCU (All except DME and DH)	4,580	(\$228.89)	(\$12,579,794.40)
National TCU-CAR (All except DME)	8,109	(\$228.89)	(\$22,272,828.12)
National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	34,204	(\$228.89)	(\$93,947,442.72)
Yardmasters (BNSF, CSX, KCS, NS, UP, SOO, DH)	1,505	(\$228.89)	(\$4,133,753.40)
Misc Indep (DME, portions of DH & SOO, portions of CN)	3,873	(\$234.30)	(\$10,889,326.80)
Total Union	120,009		(\$329,877,755.28)
All Other @ \$4,050,907.61 total per month			(\$48,610,891.32)
Total			(\$378,488,646.60)

Reduction in Wage Rate Per ST Hour	-\$1.39458129
Deduct this amount from the Wage Rate	-\$1.395

National Contracts U.S.

Straight Time Hourly Rate															Check
Weight	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Sum
	0.237471	0.030672	0.177544	0.005306	0.046889	0.14639	0.054965	0.013713	0.041596	0.00791	0.033258	0.019477	0.010574	0.174238	1.00000
2019 Avg.	31.400	31.531	33.551	32.837	35.094	30.342	32.717	27.414	33.061	31.103	33.248	44.050	42.900	55.342	494.590
12/31/19	31.829	31.987	34.069	33.322	35.608	30.778	33.229	27.817	33.567	31.546	33.736	44.540	43.500	55.342	500.872
1/1/20	31.829	31.987	34.069	33.322	35.608	30.778	33.229	27.817	33.567	31.546	33.736	44.540	43.500	57.002	
4/1/20	31.829	31.987	34.069	33.322	35.608	30.778	33.229	27.817	33.567	31.546	33.736	44.540	43.500	57.002	
7/1/20	31.829	31.987	34.069	33.322	35.608	30.778	33.229	27.817	33.567	31.546	33.736	44.540	43.500	57.002	
10/1/20	31.829	31.987	34.069	33.322	35.608	30.778	33.229	27.817	33.567	31.546	33.736	44.540	43.500	57.002	
1/1/21	31.829	31.987	34.069	33.322	35.608	30.778	33.229	27.817	33.567	31.546	33.736	44.540	43.500	57.002	
4/1/21	31.829	31.987	34.069	33.322	35.608	30.778	33.229	27.817	33.567	31.546	33.736	44.540	43.500	57.002	
7/1/21	31.829	31.987	34.069	33.322	35.608	30.778	33.229	27.817	33.567	31.546	33.736	44.540	43.500	57.002	

Weighted Straight Time Hourly Rate															
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Total
2019 Avg.	7.457	0.967	5.957	0.174	1.646	4.442	1.798	0.376	1.375	0.246	1.106	0.858	0.454	9.643	36.497
12/31/19	7.559	0.981	6.049	0.177	1.670	4.505	1.826	0.381	1.396	0.250	1.122	0.868	0.460	9.643	36.886
1/1/20	7.559	0.981	6.049	0.177	1.670	4.505	1.826	0.381	1.396	0.250	1.122	0.868	0.460	9.932	37.175
4/1/20	7.559	0.981	6.049	0.177	1.670	4.505	1.826	0.381	1.396	0.250	1.122	0.868	0.460	9.932	37.175
7/1/20	7.559	0.981	6.049	0.177	1.670	4.505	1.826	0.381	1.396	0.250	1.122	0.868	0.460	9.932	37.175
10/1/20	7.559	0.981	6.049	0.177	1.670	4.505	1.826	0.381	1.396	0.250	1.122	0.868	0.460	9.932	37.175
1/1/21	7.559	0.981	6.049	0.177	1.670	4.505	1.826	0.381	1.396	0.250	1.122	0.868	0.460	9.932	37.175
4/1/21	7.559	0.981	6.049	0.177	1.670	4.505	1.826	0.381	1.396	0.250	1.122	0.868	0.460	9.932	37.175
7/1/21	7.559	0.981	6.049	0.177	1.670	4.505	1.826	0.381	1.396	0.250	1.122	0.868	0.460	9.932	37.175

Note: The 2019 Average and 12/31/19 Straight Time Hourly Rates are the industry rates, and include all Class I railroad employees. The rates for 1/1/20 through 7/1/21 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 2019 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	YDMSTRS	OTHER	1.00000
2019 Avg.	0.237471	0.030672	0.177544	0.005306	0.046889	0.14639	0.054965	0.013713	0.041596	0.00791	0.033258	0.019477	0.010574	0.174238	83.468
12/31/19	10.499	4.400	12.740	4.873	7.734	5.172	4.366	3.460	5.254	3.040	5.501	6.962	8.283	1.182	
1/1/20	10.643	4.464	12.937	4.945	7.848	5.247	4.434	3.511	5.335	3.084	5.582	7.040	8.398	1.218	
4/1/20	10.643	4.464	12.937	4.945	7.848	5.247	4.434	3.511	5.335	3.084	5.582	7.040	8.398	1.218	
7/1/20	10.643	4.464	12.937	4.945	7.848	5.247	4.434	3.511	5.335	3.084	5.582	7.040	8.398	1.218	
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7/1/21	10.643	4.464	12.937	4.945	7.848	5.247	4.434	3.511	5.335	3.084	5.582	7.040	8.398	1.218	

Pay For Time Not Worked Hourly Rate																Total
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER		
2019 Avg.	2.493	0.135	2.262	0.026	0.363	0.757	0.240	0.047	0.219	0.024	0.183	0.136	0.088	0.206		7.178
12/31/19	2.527	0.137	2.297	0.026	0.368	0.768	0.244	0.048	0.222	0.024	0.186	0.137	0.089	0.206		7.279
1/1/20	2.527	0.137	2.297	0.026	0.368	0.768	0.244	0.048	0.222	0.024	0.186	0.137	0.089	0.212		7.285
4/1/20	2.527	0.137	2.297	0.026	0.368	0.768	0.244	0.048	0.222	0.024	0.186	0.137	0.089	0.212		7.285
7/1/20	2.527	0.137	2.297	0.026	0.368	0.768	0.244	0.048	0.222	0.024	0.186	0.137	0.089	0.212		7.285
10/1/20	2.527	0.137	2.297	0.026	0.368	0.768	0.244	0.048	0.222	0.024	0.186	0.137	0.089	0.212		7.285
1/1/21	2.527	0.137	2.297	0.026	0.368	0.768	0.244	0.048	0.222	0.024	0.186	0.137	0.089	0.212		7.285
4/1/21	2.527	0.137	2.297	0.026	0.368	0.768	0.244	0.048	0.222	0.024	0.186	0.137	0.089	0.212		7.285
7/1/21	2.527	0.137	2.297	0.026	0.368	0.768	0.244	0.048	0.222	0.024	0.186	0.137	0.089	0.212		7.285

U.S. National Contract

UTU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				31.40017	10.49929
12/31/19 Industry Rate				31.82936	10.64279
1/1/20			93.044%	31.82936	10.64279
4/1/20			93.044%	31.82936	10.64279
7/1/20			93.044%	31.82936	10.64279
10/1/20			93.044%	31.82936	10.64279
1/1/21			93.044%	31.82936	10.64279
4/1/21			93.044%	31.82936	10.64279
7/1/21			93.044%	31.82936	10.64279

TCU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				31.53087	4.40030
12/31/19 Industry Rate				31.98742	4.46402
1/1/20			97.808%	31.98742	4.46402
4/1/20			97.808%	31.98742	4.46402
7/1/20			97.808%	31.98742	4.46402
10/1/20			97.808%	31.98742	4.46402
1/1/21			97.808%	31.98742	4.46402
4/1/21			97.808%	31.98742	4.46402
7/1/21			97.808%	31.98742	4.46402

BLET

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				33.55141	12.74048
12/31/19 Industry Rate				34.06933	12.93715
1/1/20			63.534%	34.06933	12.93715
4/1/20			63.534%	34.06933	12.93715
7/1/20			63.534%	34.06933	12.93715
10/1/20			63.534%	34.06933	12.93715
1/1/21			63.534%	34.06933	12.93715
4/1/21			63.534%	34.06933	12.93715
7/1/21			63.534%	34.06933	12.93715

SMWIA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				32.83703	4.87274
12/31/19 Industry Rate				33.32231	4.94475
1/1/20			100.000%	33.32231	4.94475
4/1/20			100.000%	33.32231	4.94475
7/1/20			100.000%	33.32231	4.94475
10/1/20			100.000%	33.32231	4.94475
1/1/21			100.000%	33.32231	4.94475
4/1/21			100.000%	33.32231	4.94475
7/1/21			100.000%	33.32231	4.94475

BRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				35.09406	7.73430
12/31/19 Industry Rate				35.60827	7.84762
1/1/20			98.237%	35.60827	7.84762
4/1/20			98.237%	35.60827	7.84762
7/1/20			98.237%	35.60827	7.84762
10/1/20			98.237%	35.60827	7.84762
1/1/21			98.237%	35.60827	7.84762
4/1/21			98.237%	35.60827	7.84762
7/1/21			98.237%	35.60827	7.84762

BMWE

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				30.34229	5.17244
12/31/19 Industry Rate				30.77817	5.24674
1/1/20			97.448%	30.77817	5.24674
4/1/20			97.448%	30.77817	5.24674
7/1/20			97.448%	30.77817	5.24674
10/1/20			97.448%	30.77817	5.24674
1/1/21			97.448%	30.77817	5.24674
4/1/21			97.448%	30.77817	5.24674
7/1/21			97.448%	30.77817	5.24674

U.S. National Contract

TCU-Carmen

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				32.71673	4.36590
12/31/19 Industry Rate				33.22917	4.43428
1/1/20			98.465%	33.22917	4.43428
4/1/20			98.465%	33.22917	4.43428
7/1/20			98.465%	33.22917	4.43428
10/1/20			98.465%	33.22917	4.43428
1/1/21			98.465%	33.22917	4.43428
4/1/21			98.465%	33.22917	4.43428
7/1/21			98.465%	33.22917	4.43428

NCFO

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				27.41365	3.45986
12/31/19 Industry Rate				27.81716	3.51078
1/1/20			99.232%	27.81716	3.51078
4/1/20			99.232%	27.81716	3.51078
7/1/20			99.232%	27.81716	3.51078
10/1/20			99.232%	27.81716	3.51078
1/1/21			99.232%	27.81716	3.51078
4/1/21			99.232%	27.81716	3.51078
7/1/21			99.232%	27.81716	3.51078

IAM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				33.06126	5.25420
12/31/19 Industry Rate				33.56718	5.33460
1/1/20			99.023%	33.56718	5.33460
4/1/20			99.023%	33.56718	5.33460
7/1/20			99.023%	33.56718	5.33460
10/1/20			99.023%	33.56718	5.33460
1/1/21			99.023%	33.56718	5.33460
4/1/21			99.023%	33.56718	5.33460
7/1/21			99.023%	33.56718	5.33460

U.S. National Contract

IBBM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				31.10303	3.04023
12/31/19 Industry Rate				31.54601	3.08353
1/1/20			96.522%	31.54601	3.08353
4/1/20			96.522%	31.54601	3.08353
7/1/20			96.522%	31.54601	3.08353
10/1/20			96.522%	31.54601	3.08353
1/1/21			96.522%	31.54601	3.08353
4/1/21			96.522%	31.54601	3.08353
7/1/21			96.522%	31.54601	3.08353

IBEW

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				33.24761	5.50105
12/31/19 Industry Rate				33.73571	5.58181
1/1/20			98.776%	33.73571	5.58181
4/1/20			98.776%	33.73571	5.58181
7/1/20			98.776%	33.73571	5.58181
10/1/20			98.776%	33.73571	5.58181
1/1/21			98.776%	33.73571	5.58181
4/1/21			98.776%	33.73571	5.58181
7/1/21			98.776%	33.73571	5.58181

ATDA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				44.05027	6.96227
12/31/19 Industry Rate				44.54014	7.03969
1/1/20			70.664%	44.54014	7.03969
4/1/20			70.664%	44.54014	7.03969
7/1/20			70.664%	44.54014	7.03969
10/1/20			70.664%	44.54014	7.03969
1/1/21			70.664%	44.54014	7.03969
4/1/21			70.664%	44.54014	7.03969
7/1/21			70.664%	44.54014	7.03969

YDMSTRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				42.89998	8.28253
12/31/19 Industry Rate				43.50011	8.39840
1/1/20			66.274%	43.50011	8.39840
4/1/20			66.274%	43.50011	8.39840
7/1/20			66.274%	43.50011	8.39840
10/1/20			66.274%	43.50011	8.39840
1/1/21			66.274%	43.50011	8.39840
4/1/21			66.274%	43.50011	8.39840
7/1/21			66.274%	43.50011	8.39840

OTHER

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2019 Industry Avg.				55.34156	1.18210
12/31/19 Industry Rate				55.34156	1.18210
1/1/20	3.00%		100.000%	57.00180	1.21756
4/1/20			100.000%	57.00180	1.21756
7/1/20			100.000%	57.00180	1.21756
10/1/20			100.000%	57.00180	1.21756
1/1/21			100.000%	57.00180	1.21756
4/1/21			100.000%	57.00180	1.21756
7/1/21			100.000%	57.00180	1.21756

Check Sums

	Increase	Applicable	ST HR	PFTNW HR
2018 AVG			494.58991	83.46768
12/31/18			500.87188	
		1279.026%		
		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.

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DTCC GCF Repo Index

	LATEST	VALUE TRADED (BILLIONS)	52-WEEK	
			HIGH	LOW
Treasury	0.023	64.300	1.720	0.002
MBS	0.077	28.500	1.703	0.011

Secondary Market

Tuesday, February 23, 2021

Fannie Mae 30-year Mortgage Yields

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
30 days	2.309	2.103	3.017	1.751
60 days	2.341	2.139	3.081	1.804

U.S. Government Rates

Tuesday, February 23, 2021

Discount Rates [Effective Date: 3/16/20]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
	0.25	0.25	2.25	0.25

Federal Funds [Effective Date: 3/16/20]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
Effective rate	0.07	0.08	1.60	0.06
Target rate	0.00-0.25	0.00-0.25	1.50-1.75	0.00-0.25
High	0.0800	0.0900	1.6500	0.0800
Low	0.0200	0.0200	1.5500	0.0100
Bid	0.0700	0.0700	1.5700	0.0100
Offer	0.1000	0.1000	1.6000	0.0500

Treasury Bill Auction

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
4 weeks	0.025	0.030	1.575	0.000
13 weeks	0.030	0.040	1.505	0.000
26 weeks	0.045	0.060	1.440	0.045

Weekly Survey

Thursday, February 18, 2021

Freddie Mac

	LATEST	WK AGO	52-WEEK	
			HIGH	YEAR AGO
30-year fixed	2.81	2.73		3.49
15-year fixed	2.21	2.19		2.99
Five-year ARM	2.77	2.70		3.25

**RCAF Lump Sum Amortization
2021/Q2**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hour	U.S. ST Hours
NS - BLET 2020Q1 PPI	2020Q2	2020Q3				271,399,487
NS - BLET 2020Q2 PPI	2020Q3	2020Q4				271,399,487
NS - BLET 2020Q3 PPI	2020Q4	2021Q1				271,399,487
NS - BLET 2020Q4 PPI	2021Q1	2021Q2				271,399,487
NS - BLET 2021 Ave PPI	2021Q1	2021Q2				271,399,487
NS - BLET 2021 TPB	2021Q1	2021Q2				271,399,487
Total			\$34,442,700	0.12691		

Should be slightly less
than amortized amount.

Fell out

CSX - BLET 2020	2020Q1	2020Q2				271,399,487
NS - BLET 2019Q4 PPI	2020Q1	2020Q2				271,399,487
NS - BLET 2020 Ave PPI	2020Q1	2020Q2				271,399,487
NS - BLET 2020 TPB	2020Q1	2020Q2				271,399,487

Interest Rate

2020/Q2	1.505
2020/Q3	0.130
2020/Q4	0.100
2021/Q1	0.085
2021/Q2	0.030
2021/Q3	
2021/Q4	
2022/Q1	
2022/Q2	
2022/Q3	
2022/Q4	
2023/Q1	

Lump Sum Adjustment for 2021/Q2	→ 0.126940 or 0.127
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**RCAF Back Pay Amortization
2021/Q2**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hr.	U.S. ST Hours	
DME - BMW	2020Q4	2021Q1				271,399,487	2019
DME - all unions 2021	2021Q1	2021Q2				271,399,487	2019
Total			\$4,532,271	0.01669963			

Should be slightly less
than amortized amount.

Fell out

DME - all unions 2020	2020Q1	2020Q2				271,399,487	2019
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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

CP railroads 2019Q3 = DME IAM, SOO IAM, SOO BRC

Interest Rate

2020/Q2	1.505
2020/Q3	0.130
2020/Q4	0.100
2021/Q1	0.085
2021/Q2	0.030
2021/Q3	
2021/Q4	
2021/Q1	
2021/Q2	
2021/Q3	
2021/Q4	
2022/Q1	
2022/Q2	

Back Pay Adjustment for 2021/Q2

→ **0.01670**
or
0.017

Health and Welfare 2021Q2

	Employees Receiving			Total	
	Pay 2019	Monthly Contribution 2019 Avg. 2021		2019 Avg.	2021
1. All Employees					
a. Group health	142,449	\$1,607.55	\$1,697.55	\$228,993,889.95	\$241,814,299.95
b. Group dental	142,449	63.67	63.67	9,069,727.83	9,069,727.83
c. Early retirement major medical	142,449	129.38	116.94	18,430,051.62	16,657,986.06
d. Group vision	142,449	8.44	8.51	1,202,269.56	1,212,240.99
2. Supplemental Sickness					
a. Signalmen	6,773	41.32	45.05	279,860.36	305,123.65
b. Shopcrafts	21,324	67.87	87.74	1,447,259.88	1,870,967.76
c. MOW	21,940	44.82	39.94	983,350.80	876,283.60
d. Yardmasters	1,608	45.75	60.48	73,566.00	97,251.84
3. Short-Term Disability					
a. Engineers (CSX, KCS, SOO, UP)	10,898	40.00	40.00	435,920.00	435,920.00
4. Monthly Total Premiums				260,915,896.00	272,339,801.68
5. Monthly Employee Contributions To H&W					
a. National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,615	(\$228.89)	(\$228.89)	(\$369,657.35)	(369,657.35)
b. National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	22,803	(\$228.89)	(\$228.89)	(\$5,219,378.67)	(5,219,378.67)
c. National BMW (All except SOO, DME, DH)	21,373	(\$228.89)	(\$228.89)	(\$4,892,065.97)	(4,892,065.97)
d. National BRS (All except DME)	6,744	(\$228.89)	(\$228.89)	(\$1,543,634.16)	(1,543,634.16)
e. National IAM (BNSF, CSX, KCS, NS, SOO, UP)	6,226	(\$228.89)	(\$228.89)	(\$1,425,069.14)	(1,425,069.14)
f. National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	1,142	(\$228.89)	(\$228.89)	(\$261,392.38)	(261,392.38)
g. National IBEW (All except DME)	4,970	(\$228.89)	(\$228.89)	(\$1,137,583.30)	(1,137,583.30)
h. National NCFO (All except DME and WC)	2,057	(\$228.89)	(\$228.89)	(\$470,826.73)	(470,826.73)
i. National SMW (BNSF, CSX, KCS, NS, UP, IC)	808	(\$228.89)	(\$228.89)	(\$184,943.12)	(184,943.12)
j. National TCU (All except DME and DH)	4,580	(\$228.89)	(\$228.89)	(\$1,048,316.20)	(1,048,316.20)
k. National TCU-CAR (All except DME)	8,109	(\$228.89)	(\$228.89)	(\$1,856,069.01)	(1,856,069.01)
l. National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	34,204	(\$228.89)	(\$228.89)	(\$7,828,953.56)	(7,828,953.56)
m. Yardmasters (BNSF, CSX, KCS, NS, UP*, SOO, DH)	1,505	(\$228.89)	(\$228.89)	(\$344,479.45)	(\$344,479.45)
n. Misc Indep (DME, portions of DH & SOO, portions of CN)	3,873	(\$231.92)	(\$234.30)	(\$898,225.17)	(907,431.27)
Total Major Union	120,009			(\$27,480,594.21)	(\$27,489,800.31)
All Other Employee Contributions*				(\$4,042,480.71)	(\$4,042,480.71)
6. Net Employer Monthly Payments				\$229,392,821.08	\$240,807,520.66
7. Ratio Projected Year to Base Year, Based on Net Monthly Payments					1.04976
8. H&W hourly rate for base year 2019				\$8.118	
9. H&W hourly rate for projected quarter					\$8.522

* Non-union employee contributions net of opt-outs. The \$27,480,594.21 in major union contributions, plus \$4,042,480.71 in all other employee contributions, totals to the 12-month average of the total employee contributions reported to the AAR in its WF survey.

Railroad Retirement and Medicare for RCAF

Inputs:

RRB Earnings Distribution Year	2018	Tier I Maximum Taxable Earnings for 2021	142,800
Wage Statistics Year	2019	Tier II Maximum Taxable Earnings for 2021	106,200
Current Year	2021	Medicare Maximum Taxable Earnings for 2021	no limit
Employees Receiving Pay*	142,449	Tier I Employer Tax Rate for 2021	6.20%
* from 2019 final wage statistics		Tier II Employer Tax Rate for 2021	13.10%
		Medicare Employer Tax Rate for 2021	1.45%

USA RCAF	Wage Rate	Update Factor	Railroad Retirement Tax	Hourly Rate
2018	\$41.687			
2019	\$43.000	1.03150	\$647,882,921	\$8.758
1Q/2021	\$43.620	1.04637	\$669,793,917	\$9.054
2Q/2021	\$43.397	1.04102	\$667,414,569	\$9.022
3Q/2021		0.00000	--	\$0.000
4Q/2021		0.00000	--	\$0.000

Railroad Retirement & Medicare, U.S.

From 2018 Earnings Distribution			1Q/2021 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 Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)			
									Tier I	Tier II	Medicare	
\$0 - 41,699	\$27,759	1.052 %	1,499	\$29,046	\$7,262	\$7,262	\$7,262	\$7,262	\$10,881,881	\$10,881,881	\$10,881,881	
41,700 - 43,699	\$42,886	0.473	674	44,875	11,219	11,219	11,219	11,219	7,558,944	7,558,944	7,558,944	
43,700 - 45,699	\$44,794	0.368	524	46,871	11,718	11,718	11,718	11,718	6,142,598	6,142,598	6,142,598	
45,700 - 47,699	\$46,360	0.579	825	48,510	12,127	12,127	12,127	12,127	10,002,451	10,002,451	10,002,451	
47,700 - 49,699	\$48,585	0.631	899	50,838	12,709	12,709	12,709	12,709	11,423,942	11,423,942	11,423,942	
49,700 - 51,699	\$50,995	0.631	899	53,360	13,340	13,340	13,340	13,340	11,990,613	11,990,613	11,990,613	
51,700 - 53,699	\$52,927	1.105	1,574	55,381	13,845	13,845	13,845	13,845	21,793,350	21,793,350	21,793,350	
53,700 - 55,699	\$54,762	1.105	1,574	57,301	14,325	14,325	14,325	14,325	22,548,934	22,548,934	22,548,934	
55,700 - 57,699	\$56,774	1.420	2,023	59,407	14,852	14,852	14,852	14,852	30,041,545	30,041,545	30,041,545	
57,700 - 59,699	\$58,646	0.999	1,423	61,365	15,341	15,341	15,341	15,341	21,831,738	21,831,738	21,831,738	
59,700 - 61,699	\$60,905	1.894	2,698	63,729	15,932	15,932	15,932	15,932	42,985,042	42,985,042	42,985,042	
61,700 - 63,699	\$62,663	2.578	3,672	65,569	16,392	16,392	16,392	16,392	60,197,510	60,197,510	60,197,510	
63,700 - 65,699	\$64,661	3.051	4,346	67,659	16,915	16,915	16,915	16,915	73,513,831	73,513,831	73,513,831	
65,700 - 67,699	\$66,705	3.524	5,020	69,798	17,450	17,450	17,450	17,450	87,594,880	87,594,880	87,594,880	
67,700 - 69,699	\$68,607	3.524	5,020	71,788	17,947	17,947	17,947	17,947	90,092,526	90,092,526	90,092,526	
69,700 - 71,699	\$70,683	3.630	5,171	73,961	18,490	18,490	18,490	18,490	95,610,597	95,610,597	95,610,597	
71,700 - 73,699	\$72,689	3.261	4,645	76,060	19,015	19,015	19,015	19,015	88,329,124	88,329,124	88,329,124	
73,700 - 75,699	\$74,731	2.998	4,271	78,196	19,549	19,549	19,549	19,549	83,486,615	83,486,615	83,486,615	
75,700 - 77,699	\$76,815	2.893	4,121	80,377	20,094	20,094	20,094	20,094	82,809,259	82,809,259	82,809,259	
77,700 - 79,699	\$78,625	3.893	5,546	82,271	20,568	20,568	20,568	20,568	114,058,983	114,058,983	114,058,983	
79,700 - 81,699	\$80,695	3.156	4,496	84,437	21,109	21,109	21,109	21,109	94,900,402	94,900,402	94,900,402	
81,700 - 83,699	\$82,632	3.261	4,645	86,464	21,616	21,616	21,616	21,616	100,411,509	100,411,509	100,411,509	
83,700 - 85,699	\$84,635	3.051	4,346	88,559	22,140	22,140	22,140	22,140	96,222,501	96,222,501	96,222,501	
85,700 - 87,699	\$86,708	3.156	4,496	90,729	22,682	22,682	22,682	22,682	101,971,920	101,971,920	101,971,920	
87,700 - 89,699	\$88,593	2.946	4,197	92,701	23,175	23,175	23,175	23,175	97,256,040	97,256,040	97,256,040	
89,700 - 91,699	\$90,613	3.051	4,346	94,815	23,704	23,704	23,704	23,704	103,018,957	103,018,957	103,018,957	
91,700 - 93,699	\$92,672	2.578	3,672	96,969	24,242	24,242	24,242	24,242	89,025,799	89,025,799	89,025,799	
93,700 - 95,699	\$94,637	2.735	3,896	99,025	24,756	24,756	24,756	24,756	96,450,110	96,450,110	96,450,110	
95,700 - 97,699	\$96,662	2.104	2,997	101,144	25,286	25,286	25,286	25,286	75,785,469	75,785,469	75,785,469	
97,700 - 99,699	\$98,587	2.209	3,147	103,158	25,790	25,790	25,790	25,790	81,152,107	81,152,107	81,152,107	
99,700 - 101,699	\$100,672	2.209	3,147	105,340	26,335	26,335	26,335	26,335	82,868,379	82,868,379	82,868,379	
101,700 - 103,699	\$102,671	2.104	2,997	107,432	26,858	26,858	26,550	26,858	80,496,678	79,573,721	80,496,678	
103,700 - 105,699	\$104,782	1.999	2,848	109,641	27,410	27,410	26,550	27,410	78,051,977	75,602,599	78,051,977	
105,700 - 107,699	\$106,674	2.157	3,073	111,620	27,905	27,905	26,550	27,905	85,741,911	81,578,192	85,741,911	
107,700 - 109,699	\$108,720	2.052	2,923	113,761	28,440	28,440	26,550	28,440	83,132,575	77,607,070	83,132,575	
109,700 - 111,699	\$110,896	1.105	1,574	116,038	29,010	29,010	26,550	29,010	45,662,806	41,791,331	45,662,806	
111,700 - 113,699	\$112,783	1.420	2,023	118,013	29,503	29,503	26,550	29,503	59,678,297	53,704,697	59,678,297	
113,700 - 115,699	\$114,721	1.315	1,873	120,041	30,010	30,010	26,550	30,010	56,215,116	49,733,575	56,215,116	
\$115,700 - over	\$152,731	17.783	25,332	159,813	39,953	35,700	26,550	39,953	904,341,892	672,556,786	1,012,084,226	
TOTAL	\$93,738	100.000	142,449						Total Taxable Earnings	3,385,278,811	3,124,105,530	3,493,021,145
									Employer Tax Rate	6.20%	13.10%	1.45%
									Quarterly Payment	\$209,887,286	\$409,257,824	\$50,648,807

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

\$669,793,917

Railroad Retirement & Medicare, U.S.

From 2018 Earnings Distribution			2Q/2021 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 Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)		
									Tier I	Tier II	Medicare
\$0 - 41,699	\$27,759	1.052	1,499	\$28,898	\$7,224	\$7,224	\$7,224	\$7,224	\$10,826,250	\$10,826,250	\$10,826,250
41,700 - 43,699	\$42,886	0.473	674	44,645	11,161	11,161	11,161	11,161	7,520,300	7,520,300	7,520,300
43,700 - 45,699	\$44,794	0.368	524	46,631	11,658	11,658	11,658	11,658	6,111,195	6,111,195	6,111,195
45,700 - 47,699	\$46,360	0.579	825	48,262	12,065	12,065	12,065	12,065	9,951,315	9,951,315	9,951,315
47,700 - 49,699	\$48,585	0.631	899	50,578	12,644	12,644	12,644	12,644	11,365,539	11,365,539	11,365,539
49,700 - 51,699	\$50,995	0.631	899	53,087	13,272	13,272	13,272	13,272	11,929,313	11,929,313	11,929,313
51,700 - 53,699	\$52,927	1.105	1,574	55,098	13,775	13,775	13,775	13,775	21,681,935	21,681,935	21,681,935
53,700 - 55,699	\$54,762	1.105	1,574	57,008	14,252	14,252	14,252	14,252	22,433,656	22,433,656	22,433,656
55,700 - 57,699	\$56,774	1.420	2,023	59,103	14,776	14,776	14,776	14,776	29,887,963	29,887,963	29,887,963
57,700 - 59,699	\$58,646	0.999	1,423	61,052	15,263	15,263	15,263	15,263	21,720,127	21,720,127	21,720,127
59,700 - 61,699	\$60,905	1.894	2,698	63,403	15,851	15,851	15,851	15,851	42,765,288	42,765,288	42,765,288
61,700 - 63,699	\$62,663	2.578	3,672	65,233	16,308	16,308	16,308	16,308	59,889,760	59,889,760	59,889,760
63,700 - 65,699	\$64,661	3.051	4,346	67,313	16,828	16,828	16,828	16,828	73,138,004	73,138,004	73,138,004
65,700 - 67,699	\$66,705	3.524	5,020	69,441	17,360	17,360	17,360	17,360	87,147,065	87,147,065	87,147,065
67,700 - 69,699	\$68,607	3.524	5,020	71,421	17,855	17,855	17,855	17,855	89,631,942	89,631,942	89,631,942
69,700 - 71,699	\$70,683	3.630	5,171	73,582	18,396	18,396	18,396	18,396	95,121,804	95,121,804	95,121,804
71,700 - 73,699	\$72,689	3.261	4,645	75,671	18,918	18,918	18,918	18,918	87,877,556	87,877,556	87,877,556
73,700 - 75,699	\$74,731	2.998	4,271	77,796	19,449	19,449	19,449	19,449	83,059,804	83,059,804	83,059,804
75,700 - 77,699	\$76,815	2.893	4,121	79,966	19,991	19,991	19,991	19,991	82,385,911	82,385,911	82,385,911
77,700 - 79,699	\$78,625	3.893	5,546	81,850	20,463	20,463	20,463	20,463	113,475,875	113,475,875	113,475,875
79,700 - 81,699	\$80,695	3.156	4,496	84,005	21,001	21,001	21,001	21,001	94,415,240	94,415,240	94,415,240
81,700 - 83,699	\$82,632	3.261	4,645	86,022	21,505	21,505	21,505	21,505	99,898,172	99,898,172	99,898,172
83,700 - 85,699	\$84,635	3.051	4,346	88,107	22,027	22,027	22,027	22,027	95,730,579	95,730,579	95,730,579
85,700 - 87,699	\$86,708	3.156	4,496	90,265	22,566	22,566	22,566	22,566	101,450,605	101,450,605	101,450,605
87,700 - 89,699	\$88,593	2.946	4,197	92,227	23,057	23,057	23,057	23,057	96,758,835	96,758,835	96,758,835
89,700 - 91,699	\$90,613	3.051	4,346	94,330	23,582	23,582	23,582	23,582	102,492,290	102,492,290	102,492,290
91,700 - 93,699	\$92,672	2.578	3,672	96,473	24,118	24,118	24,118	24,118	88,570,670	88,570,670	88,570,670
93,700 - 95,699	\$94,637	2.735	3,896	98,519	24,630	24,630	24,630	24,630	95,957,025	95,957,025	95,957,025
95,700 - 97,699	\$96,662	2.104	2,997	100,627	25,157	25,157	25,157	25,157	75,398,029	75,398,029	75,398,029
97,700 - 99,699	\$98,587	2.209	3,147	102,631	25,658	25,658	25,658	25,658	80,737,230	80,737,230	80,737,230
99,700 - 101,699	\$100,672	2.209	3,147	104,802	26,200	26,200	26,200	26,200	82,444,728	82,444,728	82,444,728
101,700 - 103,699	\$102,671	2.104	2,997	106,883	26,721	26,721	26,550	26,721	80,085,152	79,573,721	80,085,152
103,700 - 105,699	\$104,782	1.999	2,848	109,080	27,270	27,270	26,550	27,270	77,652,950	75,602,599	77,652,950
105,700 - 107,699	\$106,674	2.157	3,073	111,050	27,762	27,762	26,550	27,762	85,303,570	81,578,192	85,303,570
107,700 - 109,699	\$108,720	2.052	2,923	113,180	28,295	28,295	26,550	28,295	82,707,573	77,607,070	82,707,573
109,700 - 111,699	\$110,896	1.105	1,574	115,445	28,861	28,861	26,550	28,861	45,429,362	41,791,331	45,429,362
111,700 - 113,699	\$112,783	1.420	2,023	117,409	29,352	29,352	26,550	29,352	59,373,201	53,704,697	59,373,201
113,700 - 115,699	\$114,721	1.315	1,873	119,427	29,857	29,857	26,550	29,857	55,927,725	49,733,575	55,927,725
\$115,700 - over	\$152,731	17.783	25,332	158,996	39,749	35,700	26,550	39,749	904,341,892	672,556,786	1,006,910,114
TOTAL		100.000	142,449					Total Taxable Earnings	3,372,595,433	3,113,921,978	3,475,163,654
								Employer Tax Rate	6.20%	13.10%	1.45%
								Quarterly Payment	\$209,100,917	\$407,923,779	\$50,389,873

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

\$667,414,569

Railroad Retirement & Medicare, U.S.

From 2018 Earnings Distribution			3Q/2021 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 Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)		
									Tier I	Tier II	Medicare
\$0 - 41,699	\$27,759	1.052	1,499	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41,700 - 43,699	\$42,886	0.473	674	0	0	0	0	0	0	0	0
43,700 - 45,699	\$44,794	0.368	524	0	0	0	0	0	0	0	0
45,700 - 47,699	\$46,360	0.579	825	0	0	0	0	0	0	0	0
47,700 - 49,699	\$48,585	0.631	899	0	0	0	0	0	0	0	0
49,700 - 51,699	\$50,995	0.631	899	0	0	0	0	0	0	0	0
51,700 - 53,699	\$52,927	1.105	1,574	0	0	0	0	0	0	0	0
53,700 - 55,699	\$54,762	1.105	1,574	0	0	0	0	0	0	0	0
55,700 - 57,699	\$56,774	1.420	2,023	0	0	0	0	0	0	0	0
57,700 - 59,699	\$58,646	0.999	1,423	0	0	0	0	0	0	0	0
59,700 - 61,699	\$60,905	1.894	2,698	0	0	0	0	0	0	0	0
61,700 - 63,699	\$62,663	2.578	3,672	0	0	0	0	0	0	0	0
63,700 - 65,699	\$64,661	3.051	4,346	0	0	0	0	0	0	0	0
65,700 - 67,699	\$66,705	3.524	5,020	0	0	0	0	0	0	0	0
67,700 - 69,699	\$68,607	3.524	5,020	0	0	0	0	0	0	0	0
69,700 - 71,699	\$70,683	3.630	5,171	0	0	0	0	0	0	0	0
71,700 - 73,699	\$72,689	3.261	4,645	0	0	0	0	0	0	0	0
73,700 - 75,699	\$74,731	2.998	4,271	0	0	0	0	0	0	0	0
75,700 - 77,699	\$76,815	2.893	4,121	0	0	0	0	0	0	0	0
77,700 - 79,699	\$78,625	3.893	5,546	0	0	0	0	0	0	0	0
79,700 - 81,699	\$80,695	3.156	4,496	0	0	0	0	0	0	0	0
81,700 - 83,699	\$82,632	3.261	4,645	0	0	0	0	0	0	0	0
83,700 - 85,699	\$84,635	3.051	4,346	0	0	0	0	0	0	0	0
85,700 - 87,699	\$86,708	3.156	4,496	0	0	0	0	0	0	0	0
87,700 - 89,699	\$88,593	2.946	4,197	0	0	0	0	0	0	0	0
89,700 - 91,699	\$90,613	3.051	4,346	0	0	0	0	0	0	0	0
91,700 - 93,699	\$92,672	2.578	3,672	0	0	0	0	0	0	0	0
93,700 - 95,699	\$94,637	2.735	3,896	0	0	0	0	0	0	0	0
95,700 - 97,699	\$96,662	2.104	2,997	0	0	0	0	0	0	0	0
97,700 - 99,699	\$98,587	2.209	3,147	0	0	0	0	0	0	0	0
99,700 - 101,699	\$100,672	2.209	3,147	0	0	0	0	0	0	0	0
101,700 - 103,699	\$102,671	2.104	2,997	0	0	0	479	0	0	1,434,389	0
103,700 - 105,699	\$104,782	1.999	2,848	0	0	0	1,580	0	0	4,499,729	0
105,700 - 107,699	\$106,674	2.157	3,073	0	0	0	2,568	0	0	7,889,097	0
107,700 - 109,699	\$108,720	2.052	2,923	0	0	0	3,635	0	0	10,626,009	0
109,700 - 111,699	\$110,896	1.105	1,574	0	0	0	4,771	0	0	7,509,505	0
111,700 - 113,699	\$112,783	1.420	2,023	0	0	0	5,756	0	0	11,642,103	0
113,700 - 115,699	\$114,721	1.315	1,873	0	0	0	6,767	0	0	12,675,690	0
\$115,700 - over	\$152,731	17.783	25,332	0	0	8,302	26,550	0	210,310,555	672,556,786	0
TOTAL		100.000	142,449						210,310,555	728,833,307	0
									Employer Tax Rate	6.20%	13.10%
									Quarterly Payment	\$13,039,254	\$95,477,163
											\$0

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

\$108,516,418

Railroad Retirement & Medicare, U.S.

From 2018 Earnings Distribution			4Q/2021 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 Qtly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)		
									Tier I	Tier II	Medicare
\$0 - 41,699	\$27,759	1.052	1,499	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41,700 - 43,699	\$42,886	0.473	674	0	0	0	0	0	0	0	0
43,700 - 45,699	\$44,794	0.368	524	0	0	0	0	0	0	0	0
45,700 - 47,699	\$46,360	0.579	825	0	0	0	0	0	0	0	0
47,700 - 49,699	\$48,585	0.631	899	0	0	0	0	0	0	0	0
49,700 - 51,699	\$50,995	0.631	899	0	0	0	0	0	0	0	0
51,700 - 53,699	\$52,927	1.105	1,574	0	0	0	0	0	0	0	0
53,700 - 55,699	\$54,762	1.105	1,574	0	0	0	0	0	0	0	0
55,700 - 57,699	\$56,774	1.420	2,023	0	0	0	0	0	0	0	0
57,700 - 59,699	\$58,646	0.999	1,423	0	0	0	0	0	0	0	0
59,700 - 61,699	\$60,905	1.894	2,698	0	0	0	0	0	0	0	0
61,700 - 63,699	\$62,663	2.578	3,672	0	0	0	0	0	0	0	0
63,700 - 65,699	\$64,661	3.051	4,346	0	0	0	0	0	0	0	0
65,700 - 67,699	\$66,705	3.524	5,020	0	0	0	0	0	0	0	0
67,700 - 69,699	\$68,607	3.524	5,020	0	0	0	0	0	0	0	0
69,700 - 71,699	\$70,683	3.630	5,171	0	0	0	0	0	0	0	0
71,700 - 73,699	\$72,689	3.261	4,645	0	0	0	0	0	0	0	0
73,700 - 75,699	\$74,731	2.998	4,271	0	0	0	0	0	0	0	0
75,700 - 77,699	\$76,815	2.893	4,121	0	0	0	0	0	0	0	0
77,700 - 79,699	\$78,625	3.893	5,546	0	0	0	0	0	0	0	0
79,700 - 81,699	\$80,695	3.156	4,496	0	0	0	0	0	0	0	0
81,700 - 83,699	\$82,632	3.261	4,645	0	0	0	0	0	0	0	0
83,700 - 85,699	\$84,635	3.051	4,346	0	0	0	0	0	0	0	0
85,700 - 87,699	\$86,708	3.156	4,496	0	0	0	0	0	0	0	0
87,700 - 89,699	\$88,593	2.946	4,197	0	0	0	0	0	0	0	0
89,700 - 91,699	\$90,613	3.051	4,346	0	0	0	0	0	0	0	0
91,700 - 93,699	\$92,672	2.578	3,672	0	0	0	0	0	0	0	0
93,700 - 95,699	\$94,637	2.735	3,896	0	0	0	0	0	0	0	0
95,700 - 97,699	\$96,662	2.104	2,997	0	0	0	0	0	0	0	0
97,700 - 99,699	\$98,587	2.209	3,147	0	0	0	0	0	0	0	0
99,700 - 101,699	\$100,672	2.209	3,147	0	0	0	0	0	0	0	0
101,700 - 103,699	\$102,671	2.104	2,997	0	0	0	0	0	0	0	0
103,700 - 105,699	\$104,782	1.999	2,848	0	0	0	0	0	0	0	0
105,700 - 107,699	\$106,674	2.157	3,073	0	0	0	0	0	0	0	0
107,700 - 109,699	\$108,720	2.052	2,923	0	0	0	0	0	0	0	0
109,700 - 111,699	\$110,896	1.105	1,574	0	0	0	0	0	0	0	0
111,700 - 113,699	\$112,783	1.420	2,023	0	0	0	0	0	0	0	0
113,700 - 115,699	\$114,721	1.315	1,873	0	0	0	0	0	0	0	0
\$115,700 - over	\$152,731	17.783	25,332	0	0	0	52	0	0	1,323,983	0
TOTAL		100.000	142,449						0	1,323,983	0
Total Taxable Earnings									0	1,323,983	0
Employer Tax Rate									6.20%	13.10%	1.45%
Quarterly Payment									\$0	\$173,442	\$0
Total Tier I, Tier II, and Medicare Paid this Quarter											\$173,442

RCAF Unemployment Insurance Tax

	Unemployment Ins.			RRB	Factor	Avg. Ann.	Un. Ins.
	Tax	Earnings	Hourly	Sample	To Update	Taxable	Hourly
	Rate	Base	Earnings	Year	RRB Sample	Earnings	Rate
			\$39.887	(2015)			
2016 Avg.	2.73%	\$17,460	\$39.231		0.983554	\$16,664.96	\$0.247
3Q/17 reb.	3.37%	\$18,540	\$39.154		0.981623	\$17,655.72	\$0.323
4Q/17	3.37%	\$18,540	\$39.156		0.981673	\$17,655.75	\$0.323
1Q/18	3.76%	\$18,720	\$40.555		1.016747	\$17,843.78	\$0.364
2Q/18	3.76%	\$18,720	\$40.961		1.026926	\$17,850.31	\$0.364
3Q/18	3.76%	\$18,720	\$42.431		1.063780	\$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	3.38%	\$19,260	\$42.805		1.091101	\$18,330.97	\$0.333
2Q/19	3.38%	\$19,260	\$42.756		1.089852	\$18,330.37	\$0.333
3Q/19	3.38%	\$19,260	\$43.306		1.103872	\$18,336.98	\$0.333
			\$39.599	(2017)			
2018 Avg.	3.76%	\$18,720	\$41.687		1.052729	\$17,600.87	\$0.347
3Q/19 reb.	3.38%	\$19,260	\$43.672		1.102856	\$18,120.16	\$0.321
4Q/19	3.38%	\$19,260	\$43.660		1.102553	\$18,119.99	\$0.321
1Q/20	0.99%	\$19,860	\$43.839		1.107073	\$18,666.82	\$0.097
2Q/20	0.99%	\$19,860	\$43.626		1.101694	\$18,663.57	\$0.097
3Q/20	0.99%	\$19,860	\$43.572		1.100331	\$18,662.74	\$0.097
			\$41.687	(2018)			
2019 Avg.	3.38%	\$19,260	\$43.000		1.031497	\$17,742.46	\$0.318
3Q/20 reb.	0.99%	\$19,860	\$43.596		1.045794	\$18,283.51	\$0.096
4Q/20	0.99%	\$19,860	\$43.596		1.045794	\$18,283.51	\$0.096
1Q/21	5.69%	\$20,520	\$43.620		1.046369	\$18,867.16	\$0.569
2Q/21	5.69%	\$20,520	\$43.397		1.041020	\$18,863.22	\$0.569
3Q/21					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 SAS System
TOTAL GROSS EARNINGS AND AVERAGE GROSS EARNINGS-2018 RRB File

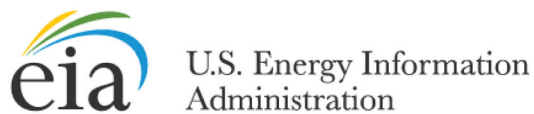
The MEANS Procedure

Variable	N	Sum	Mean
ANUAL_US	2591	45970708.66	17742.46
QTRLY_US	2591	48874592.12	18863.22

The SAS System
Factors and Caps 2019 and 2021Q2

The MEANS Procedure

Variable	N	Sum	Mean
FactorA	2591	2672.61	1.0314970
FactorQ	2591	2697.28	1.0410200
Capa	2591	49902660.00	19260.00
Capq	2591	53167320.00	20520.00



PETROLEUM & OTHER LIQUIDS

OVERVIEW

DATA

ANALYSIS & PROJECTIONS

GLOSSARY ›

FAQS ›

Spot Prices

(Crude Oil in Dollars per Barrel, Products in Dollars per Gallon)

Period: Monthly ▼

Product by Area	Graph Clear	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	42.34	39.63	39.40	40.94	47.02	52.00	1986-2021
Brent - Europe	☐	44.74	40.91	40.19	42.69	49.99	54.77	1987-2021
Conventional Gasoline								
New York Harbor, Regular	☐	1.248	1.227	1.201	1.190	1.359	1.563	1986-2021
U.S. Gulf Coast, Regular	☐	1.244	1.176	1.143	1.128	1.298	1.500	1986-2021
RBOB Regular Gasoline								
Los Angeles	☐	1.417	1.299	1.247	1.312	1.432	1.654	2003-2021
No. 2 Heating Oil								
New York Harbor	☐	1.180	1.069	1.099	1.160	1.366	1.477	1986-2021
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	1.226	1.122	1.154	1.241	1.444	1.575	2006-2021
U.S. Gulf Coast	☐	1.196	1.082	1.107	1.211	1.403	1.523	2006-2021
Los Angeles	☐	1.292	1.164	1.211	1.368	1.542	1.582	1996-2021
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	1.112	1.006	1.047	1.133	1.324	1.420	1990-2021
Propane								
Mont Belvieu, Texas	☐	0.506	0.495	0.526	0.545	0.644	0.863	1992-2021

Click on the source key icon to learn how to download series into Excel, or to embed a chart or map on your website.

- = No Data Reported; -- = Not Applicable; **NA** = Not Available; **W** = Withheld to avoid disclosure of individual company data.**Notes:** Weekly, monthly, and annual prices are calculated by EIA from daily data by taking an unweighted average of the daily closing spot prices for a given product over the specified time period. See Definitions, Sources, and Notes link above for more information on this table.

Release Date: 2/24/2021

Next Release Date: 3/3/2021

PETROLEUM & OTHER LIQUIDS

OVERVIEW

DATA

ANALYSIS & PROJECTIONS

GLOSSARY ›

FAQS ›

Spot Prices

(Crude Oil in Dollars per Barrel, Products in Dollars per Gallon)

Period: Weekly ▼

Product by Area	Graph Clear	01/15/21	01/22/21	01/29/21	02/05/21	02/12/21	02/19/21	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	52.75	52.82	52.52	55.39	58.54	60.17	1986-2021
Brent - Europe	☐	55.38	55.23	55.18	58.22	61.13	63.90	1987-2021
Conventional Gasoline								
New York Harbor, Regular	☐	1.573	1.581	1.606	1.665	1.685	1.807	1986-2021
U.S. Gulf Coast, Regular	☐	1.518	1.512	1.538	1.602	1.627	1.726	1986-2021
RBOB Regular Gasoline								
Los Angeles	☐	1.630	1.637	1.734	1.763	1.766	1.810	2003-2021
No. 2 Heating Oil								
New York Harbor	☐	1.498	1.492	1.488	1.567	1.638	1.710	1986-2021
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	1.592	1.587	1.597	1.690	1.757	1.827	2006-2021
U.S. Gulf Coast	☐	1.542	1.537	1.545	1.638	1.701	1.794	2006-2021
Los Angeles	☐	1.587	1.596	1.616	1.715	1.785	1.879	1996-2021
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	1.449	1.438	1.426	1.498	1.568	1.633	1990-2021
Propane								
Mont Belvieu, Texas	☐	0.894	0.863	0.892	0.846	0.871	0.953	1992-2021

Click on the source key icon to learn how to download series into Excel, or to embed a chart or map on your website.

- = No Data Reported; -- = Not Applicable; **NA** = Not Available; **W** = Withheld to avoid disclosure of individual company data.**Notes:** Weekly, monthly, and annual prices are calculated by EIA from daily data by taking an unweighted average of the daily closing spot prices for a given product over the specified time period. See Definitions, Sources, and Notes link above for more information on this table.

Release Date: 2/24/2021

Next Release Date: 3/3/2021

U.S.

Summary by Composition Category

	MS-2019		Prev. Idx	2021Q1		Calculation		Relative of Change
	MS Amount	Weight		Cur Idx		Prev. Idx	Cur Idx	
Forest Products	686,303,392	0.1290	343.79	330.45		44.35	42.63	
Metal Products	3,292,182,021	0.6186	162.22	173.95		100.35	107.61	
Misc. Products	1,343,286,824	0.2524	409.74	425.35		103.42	107.36	
Total	5,321,772,237	1.0000	248.12	257.60				1.0382
Total Linked			249.68	259.22				
'77 = 100 Link Fact.= 1.423			355.29	368.87				
'80 = 100 Link Fact.= 1.061			264.91	275.03				

As info only	Change
Forest Products	-3.88%
Metal Products	7.23%
Misc. Products	3.81%
Total ('80=100)	3.82%
Rounded 80 Indices	3.8%
Rounded 77 Indices	3.8%

Car Hire for RCAF - 2019 Weights

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

		1980	June 3Q/20	Sept. 4Q/20	Dec. 1Q/21	Mar. 2Q/21	June 3Q/21
RATE							
RR-OWNED TIME		31.00	64.00	65.00	65.00	65.00	--
RR-OWNED MILEAGE		4.69	6.60	6.60	6.60	6.60	--
PRIVATELY-OWNED CARS		25.47	59.16	57.15	57.33	55.73	--
AUTORACKS		47.00	86.93	86.93	87.57	84.09	--
INDEX							
RR-OWNED TIME		100.0	206.5	209.7	209.7	209.7	--
RR-OWNED MILEAGE		100.0	140.7	140.7	140.7	140.7	--
PRIVATELY-OWNED CARS		100.0	232.3	224.4	225.1	218.8	--
AUTORACKS		100.0	185.0	185.0	186.3	178.9	--
CAR HIRE INDEX (old wts)	2018	100.0	225.8	--	--	--	--
CAR HIRE INDEX (new wts)	2019	100.0	225.6	218.8	219.4	213.6	--
CAR HIRE INDEX (LINKED)		100.0	222.6	215.9	216.5	210.8	--

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

	2020 (first day of month)						2021 (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)	11,533	11,511	11,471	11,454	11,286	11,313	11,335	11,342	11,323					
Rate (in cents)														
Superstructures #3 - Auto Rack	96.0	96.0	96.0	96.0	95.0	95.0	94.0	94.0	94.0					
All other #1 - Time	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0					
All other #2 - Mileage	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6					
Private Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	54,099	54,029	53,937	53,847	53,774	53,702	53,638	53,591	53,552					
Covered Hoppers	433,856	434,193	434,236	434,187	433,113	433,042	432,151	432,666	432,708					
Tank Cars	423,965	423,766	423,859	424,177	422,993	423,827	424,233	423,774	423,357					
Others	299,225	298,544	297,753	298,033	296,888	295,883	296,327	295,521	295,229					
Rate (in cents)														
Superstructures #1 - Time	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0					
Superstructures #2 - Mileage	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0					
Superstructures #3 - Auto Rack	85.0	85.0	85.0	86.0	86.0	86.0	82.0	82.0	82.0					
Covered Hoppers #2 - Mileage	44.9	44.9	45.0	45.0	45.0	45.0	44.9	44.9	44.9					
Tank Cars #2 - Mileage	99.1	99.1	92.6	92.7	92.8	92.8	92.4	92.5	88.3					
Others #1 -Time	101.0	101.0	101.0	101.0	101.0	102.0	101.0	102.0	102.0					
Others #2 - Mileage	8.4	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5					
AVERAGE RATES														
Private Superstructures	21.21	21.21	21.21	21.21	21.21	21.21	21.21	21.21	21.21	0.00	0.00	0.00	0.00	0.00
Private Others	30.82	30.92	30.92	30.92	30.92	31.14	30.92	31.14	31.14	0.00	0.00	0.00	0.00	0.00
Private Total	59.34	59.37	57.15	57.19	57.23	57.33	57.12	57.21	55.73	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Autoracks	86.93	86.93	86.93	87.75	87.56	87.57	84.09	84.10	84.09	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Car Hire Weights	"Old Wts" "New Wts"	
	2018	2019
For RCAF & RCR		
RR-owned Time	0.052	0.040
RR-owned Mileage	0.034	0.042
Privately-owned Cars	0.871	0.879
Autoracks	0.043	0.039
----- Check sum	1.000	1.000

Weights for Equipment Rents		
(not used in Car Hire calculation)		
	2018	2019
Car Hire - U.S.	0.591	0.614
Lease Rentals - U.S.	0.409	0.386
----- 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 Process - Car Hire Rate Report

Average Car Rental Rates for 03/2021

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	11,323	108	0.059	94
Railroad	Number of Zero-Rated Vehicular Flats	98	.	.	.
Railroad	All Other Cars	374,955	65	0.066	.
Railroad	Number of Zero-Rated Other Cars	14,871	.	.	.
Railroad	Total Railroad Equipment	401,247	.	.	.
		.	.	.	.
Private	Vehicular Flats	53,552	86	0.010	82
Private	Number of Zero-Rated Vehicular Flats	48	.	.	.
Private	Covered Hoppers	432,708	0	0.449	.
Private	Number of Zero-Rated Covered Hoppers	14,468	.	.	.
Private	Tanks	423,357	0	0.883	.
Private	Number of Zero-Rated Tanks	15,972	.	.	.
Private	All Other Cars	295,229	102	0.085	.
Private	Number of Zero-Rated Other Cars	22,313	.	.	.
Private	Total Private Equipment	1,257,647	.	.	.

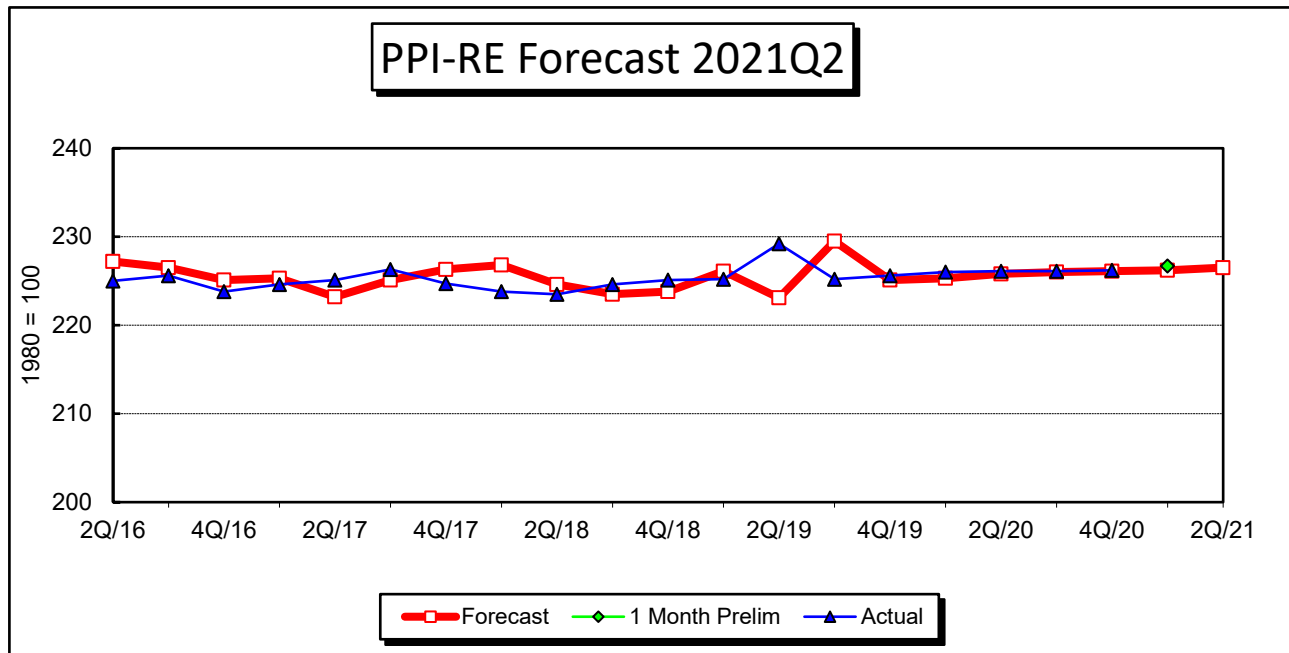
Notes
This report excludes these car types: D (Locomotives), M (MoW, EOTs, etc.), U (Containers), Z (Trailers).
All TTX equipment (including ABOX, RBOX, GONX) is contained in the Private section of report.
Equipment can be zero rated due to owners supplying incorrect or insufficient information to the 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
2Q/16	227.2	225	
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	224.6	
4Q/18	223.8	225.1	
1Q/19	226.1	225.2	
2Q/19	223.1	229.2	
3Q/19	229.5	225.2	
4Q/19	225.1	225.6	
1Q/20	225.3	226.0	
2Q/20	225.8	226.1	
3Q/20	226.0	226.1	
4Q/20	226.1	226.2	
1Q/21	226.2		226.7
2Q/21	226.5		

1980 Base

	PPI-RE Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2021Q2						
Low	202.0	223.5	-1.1%			
Midpoint	204.8	226.5	0.2%	-0.1%	0.1%	0.1%
High	207.7	229.8	1.6%			



PPI RAILROAD EQUIPMENT

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 0.45 and for Box-Jenkins was 1.16.
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

Exponential smoothing: No trend, Additive seasonality
NA(0.697, 0.331)

Component	Smoothing Wgt		Final Value
Level	0.6968		205
Seasonal	0.3309		
Seasonal Indexes			
Jan - Mar	-0.129	0.2636	0.2833
Apr - Jun	-0.1961	-0.2191	0.0025
Jul - Sep	0.07767	0.4111	-0.1094
Oct - Dec	0.1071	-0.2844	-0.2073

Within-Sample Statistics

Sample size	72	No. parameters	2
Mean	203.17	Std. deviation	1.34
R-square	0.56	Adj. R-square	0.55
Durbin-Watson	1.91	Ljung-Box(18)	18.6 P=0.58
Forecast error	0.9	BIC	0.94
MAPE	0.29	SMAPE	0.29
RMSE	0.89	MAD	0.59
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2020-Aug	204.4
2020-Sep	204.4
2020-Oct	204.4
2020-Nov	204.4
2020-Dec	204.6
2021-Jan	204.9

Forecasted Values

2.5 Lower	Forecast	97.5 Upper	
Date	2.5 Lower	Forecast	97.5 Upper
2021-Feb	203.389	205.232	207.076
2021-Mar	203.005	205.252	207.499
2021-Apr	202.185	204.773	207.361
2021-May	201.860	204.750	207.639
2021-Jun	201.809	204.971	208.133
QTR AVG	201.951	204.831	207.711



Databases, Tables & Calculators by Subject

Change Output Options:

From: 2020 To: 2021 GO

☐ include graphs ☐ include annual averages

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Data extracted on: February 22, 2021 (7:36:46 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
2020	204.3	204.3	204.3	204.4	204.4	204.4	204.4	204.4	204.4	204.4(P)	204.4(P)	204.6(P)
2021	204.9(P)											

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

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Depreciation

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 0.45 and for Box-Jenkins was 1.16.

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

Exponential smoothing: No trend, Additive seasonality

NA(0.697, 0.331)

Component	Smoothing Wgt		Final Value
Level	0.6968		205
Seasonal	0.3309		
Seasonal Indexes			
Jan - Mar	-0.129	0.2636	0.2833
Apr - Jun	-0.1961	-0.2191	0.0025
Jul - Sep	0.07767	0.4111	-0.1094
Oct - Dec	0.1071	-0.2844	-0.2073

Within-Sample Statistics

Sample size	72	No. parameters	2
Mean	203.17	Std. deviation	1.34
R-square	0.56	Adj. R-square	0.55
Durbin-Watson	1.91	Ljung-Box(18)	18.6 P=0.58
Forecast error	0.9	BIC	0.94
MAPE	0.29	SMAPE	0.29
RMSE	0.89	MAD	0.59
MAD/Mean Ratio	0		

Historic Data

Date	Historic
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

Depreciation

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	202.1
2018-May	202.1
2018-Jun	202.1
2018-Jul	204.1
2018-Aug	204.1
2018-Sep	201.1
2018-Oct	201.3
2018-Nov	201.3
2018-Dec	201.3
2019-Jan	202.1
2019-Feb	203.1
2019-Mar	206.5
2019-Apr	203.4
2019-May	203.4
2019-Jun	203.4
2019-Jul	203.5
2019-Aug	203.5
2019-Sep	203.7
2019-Oct	203.7

Depreciation

2019-Nov	203.9
2019-Dec	204
2020-Jan	204.3
2020-Feb	204.3
2020-Mar	204.3
2020-Apr	204.4
2020-May	204.4
2020-Jun	204.4
2020-Jul	204.4
2020-Aug	204.4
2020-Sep	204.4
2020-Oct	204.4
2020-Nov	204.4
2020-Dec	204.6
2021-Jan	204.9

Forecast Data

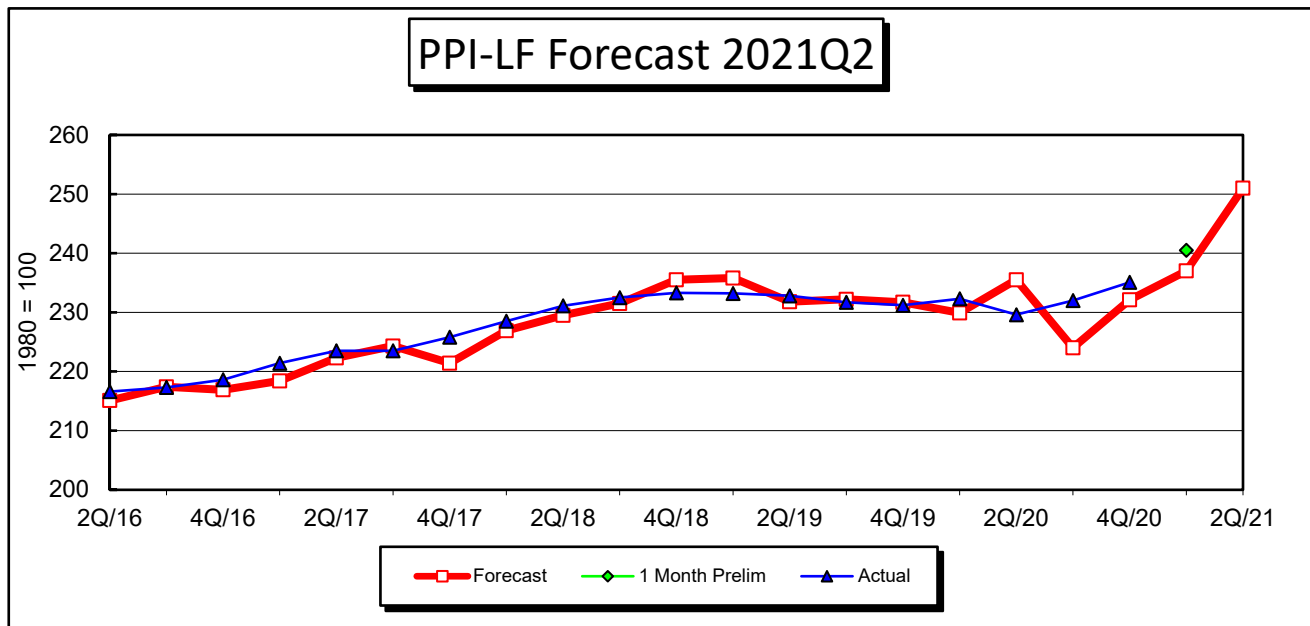
Date	2.5 Lower	Forecast	97.5 Upper
2021-Feb	203.389	205.232	207.076
2021-Mar	203.005	205.252	207.499
2021-Apr	202.185	204.773	207.361
2021-May	201.86	204.75	207.639
2021-Jun	201.809	204.971	208.133
2021-Jul	201.633	205.046	208.459
2021-Aug	201.733	205.38	209.026
2021-Sep	200.993	204.859	208.725
2021-Oct	201.002	205.076	209.15
2021-Nov	200.413	204.684	208.956
2021-Dec	200.301	204.761	209.222
2022-Jan	200.198	204.84	209.481

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

	Forecast	Actual	1 Month Prelim
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	232.5	
4Q/18	235.5	233.3	
1Q/19	235.8	233.2	
2Q/19	231.8	232.8	
3Q/19	232.2	231.7	
4Q/19	231.7	231.2	
1Q/20	229.9	232.3	
2Q/20	235.5	229.6	
3Q/20	224.0	232.0	
4Q/20	232.1	235.1	
1Q/21	237.0		240.5
2Q/21	251.0		

1980 Base

	PPI-LF Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2021Q2						
Low	218.2	244.6	6.5%			
Midpoint	223.9	251.0	9.3%	4.4%	6.8%	5.9%
High	229.6	257.4	12.1%			



**PPI INDUSTRIAL COMMODITIES LESS FUEL
AND RELATED PRODUCTS AND POWER**

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 3.68 and for Box-Jenkins was 3.53.
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(0, 2, 0)*(1, 0, 0)

Term	Coefficient	Std. Error	t-Statistic	Significance
A[12]	0.7752	0.1233	6.286	1

Within-Sample Statistics

Sample size	72	No. parameters	1
Mean	201.61	Std. deviation	6.3
R-square	0.99	Adj. R-square	0.99
Durbin-Watson	1.95	Ljung-Box(18)	21.2 P=0.73
Forecast error	0.52	BIC	0.53
MAPE	0.18	SMAPE	0.18
RMSE	0.52	MAD	0.37
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2020-Aug	207.0
2020-Sep	208.1
2020-Oct	208.8
2020-Nov	209.2
2020-Dec	211.0
2021-Jan	214.5

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2021-Feb	216.200	217.225	218.25
2021-Mar	217.735	220.027	222.319
2021-Apr	217.521	221.357	225.192
2021-May	217.924	223.539	229.153
2021-Jun	219.204	226.806	234.408
QTR AVG	218.216	223.901	229.584



Databases, Tables & Calculators by Subject

Change Output Options:

From: 2020 To: 2021 GO

☐ include graphs ☐ include annual averages

[More Formatting Options](#) ➔

Data extracted on: February 22, 2021 (8:22:44 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
2020	207.2	207.1	207.1	205.2	204.4	205.0	205.8	207.0	208.1	208.8(P)	209.2(P)	211.0(P)
2021	214.5(P)											

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

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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 3.68 and for Box-Jenkins was 3.53.

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(0, 2, 0)*(1, 0, 0)**

Term	Coefficient	Std. Error	t-Statistic	Significance
A[12]	0.7752	0.1233	6.286	1

Within-Sample Statistics

Sample size	72	No. parameters	1
Mean	201.61	Std. deviation	6.3
R-square	0.99	Adj. R-square	0.99
Durbin-Watson	1.95	Ljung-Box(18)	21.2 P=0.73
Forecast error	0.52	BIC	0.53
MAPE	0.18	SMAPE	0.18
RMSE	0.52	MAD	0.37
MAD/Mean Ratio	0		

Historic Data

Date	Historic
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

Other

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	205.4
2018-May	206.3
2018-Jun	207
2018-Jul	207.4
2018-Aug	207.6
2018-Sep	207.9
2018-Oct	208.7
2018-Nov	208.5
2018-Dec	207.8
2019-Jan	208.3
2019-Feb	208.2
2019-Mar	208.4
2019-Apr	208.2
2019-May	207.7
2019-Jun	207.1
2019-Jul	206.9
2019-Aug	206.5
2019-Sep	206.1
2019-Oct	206.5
2019-Nov	206.4
2019-Dec	206.3
2020-Jan	207.2
2020-Feb	207.1
2020-Mar	207.1
2020-Apr	205.2
2020-May	204.4

Other

2020-Jun	205
2020-Jul	205.8
2020-Aug	207
2020-Sep	208.1
2020-Oct	208.8
2020-Nov	209.2
2020-Dec	211
2021-Jan	214.5

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2021-Feb	216.2	217.225	218.25
2021-Mar	217.735	220.027	222.319
2021-Apr	217.521	221.357	225.192
2021-May	217.924	223.539	229.153
2021-Jun	219.204	226.806	234.408
2021-Jul	220.451	230.229	240.007
2021-Aug	221.833	233.961	246.09
2021-Sep	222.976	237.616	252.257
2021-Oct	223.657	240.961	258.266
2021-Nov	223.961	244.074	264.186
2021-Dec	225.214	248.271	271.329
2022-Jan	227.654	253.787	279.92

Forecast Error Calculation

	2019 Weight	Fourth Quarter 2020		Difference		Notes
		2020Q4 Forecast	2020Q4 Actual	Pt.	Pct.	
Labor	32.6%	437.1	437.1	0.0	0%	* actual=forecast
Fuel	14.2%	171.2	154.9	-16.3	-10%	from 1st month of quarter
M&S	4.9%	258.8	258.8	0.0	0%	* actual=forecast
Equip Rents	5.2%	234.1	236.1	2.0	1%	from Equipment Rents below
Depreciation	15.9%	226.1	226.2	0.1	0%	PPI-RE
Interest	2.5%	55.7	55.7	0.0	0%	* actual=forecast
Other	24.7%	232.1	235.1	3.0	1%	PPI-LF
Weighted Avg	100.0%					
1980 = 100		286.3	284.9			calculated
1980 = 100 (linked)		267.4	265.3			calculated
4Q17 = 100	2.645	101.1	100.3			calculated
4Q12 = 100	2.976	89.9	89.1			calculated
4Q07 = 100	2.459	108.7	107.9			calculated
4Q02 = 100	1.921	139.2	138.1			calculated
4Q97 = 100	1.732	154.4	153.2			calculated
Forecast Error		-0.8				calculated -0.008 = RCAF adj.
<u>Prior Quarter</u>						
1980 = 100		282.3	286.9 **			Re-calculated using new weights
1980 = 100 (linked)		263.7	267.2			
4Q17 = 100		99.7	101.0			calculated
4Q12 = 100		88.6	89.8			calculated
4Q07 = 100		107.2	108.7			calculated
4Q02 = 100		137.3	139.1			calculated
4Q97 = 100		152.3	154.3			calculated
Equipment Rents						
Car Hire	61.4%	215.9	216.3			from Equipment Rents/CHARM
Lease Rentals	38.6%	232.1	235.1			(equals PPI-LF from above)
Weighted Average		222.2	223.6			calculated
Linked		234.1	236.1			calculated
<u>Prior Quarter</u>						
Weighted Average		223.1	226.8 **			Re-calculated using new weights
Linked		235.0	239.5			
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

0.9040

0.8920

RCAF Fuel (Actual All-Inclusive Index)

October 2020

Monthly Report

	October 2020 Price (cents) (1)	1/1/81 Price (cents) (2)	1/91 New Method Linking Factors (3)	October 2020 Index 1/1/81=100 (4)	Linking Factor 1980=100 (5)	October 2020 1980=100 Current Index (6)
U.S.	126.74	89.34	99.415	141.03	1.096	154.57

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

(6) = (4) x (5)

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

	October 2020 1980=100 Current Index	Adjustment Factor	October 2020 1980=100 Linked Index
U.S.	154.57	1.00192	154.87 ←

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

Car Hire for RCAF - 2019 Weights

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

		1980	Aug 3Q/20	Nov 4Q/20	Feb 1Q/21	May 2Q/21	Aug 3Q/21
RATE							
RR-OWNED TIME		31.00	65.00	65.00	--	--	--
RR-OWNED MILEAGE		4.69	6.60	6.60	--	--	--
PRIVATELY-OWNED CARS		25.47	59.37	57.23	--	--	--
AUTORACKS		47.00	86.93	87.56	--	--	--
INDEX							
RR-OWNED TIME		100.0	209.7	209.7	--	--	--
RR-OWNED MILEAGE		100.0	140.7	140.7	--	--	--
PRIVATELY-OWNED CARS		100.0	233.1	224.7	--	--	--
AUTORACKS		100.0	185.0	186.3	--	--	--
CAR HIRE INDEX (old wts)	2018	100.0	226.7	--	--	--	--
CAR HIRE INDEX (new wts)	2019	100.0	226.4	219.1	--	--	--
CAR HIRE INDEX (LINKED)		100.0	223.5	216.3	--	--	--

Note: Indexes are rounded, rates are full float.

Car Hire Data From CHARM

	2020 (first day of month)						2021 (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)	11,533	11,511	11,471	11,454	11,286	11,313								
Rate (in cents)														
Superstructures #3 - Auto Rack	96.0	96.0	96.0	96.0	95.0	95.0								
All other #1 - Time	65.0	65.0	65.0	65.0	65.0	65.0								
All other #2 - Mileage	6.6	6.6	6.6	6.6	6.6	6.6								
Private Equipment														
No. of Cars (cars with rates only)														
Superstructures (Vehicular Flats)	54,099	54,029	53,937	53,847	53,774	53,702								
Covered Hoppers	433,856	434,193	434,236	434,187	433,113	433,042								
Tank Cars	423,965	423,766	423,859	424,177	422,993	423,827								
Others	299,225	298,544	297,753	298,033	296,888	295,883								
Rate (in cents)														
Superstructures #1 - Time	86.0	86.0	86.0	86.0	86.0	86.0								
Superstructures #2 - Mileage	1.0	1.0	1.0	1.0	1.0	1.0								
Superstructures #3 - Auto Rack	85.0	85.0	85.0	86.0	86.0	86.0								
Covered Hoppers #2 - Mileage	44.9	44.9	45.0	45.0	45.0	45.0								
Tank Cars #2 - Mileage	99.1	99.1	92.6	92.7	92.8	92.8								
Others #1 -Time	101.0	101.0	101.0	101.0	101.0	102.0								
Others #2 - Mileage	8.4	8.5	8.5	8.5	8.5	8.5								
AVERAGE RATES														
Private Superstructures	21.21	21.21	21.21	21.21	21.21	21.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Others	30.82	30.92	30.92	30.92	30.92	31.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Total	59.34	59.37	57.15	57.19	57.23	57.33	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Autoracks	86.93	86.93	86.93	87.75	87.56	87.57	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Car Hire Weights	"Old Wts" "New Wts"	
	2018	2019
For RCAF & RCR		
RR-owned Time	0.052	0.040
RR-owned Mileage	0.034	0.042
Privately-owned Cars	0.871	0.879
Autoracks	0.043	0.039
----- Check sum	1.000	1.000

Weights for Equipment Rents		
(not used in Car Hire calculation)		
	2018	2019
Car Hire - U.S.	0.591	0.614
Lease Rentals - U.S.	0.409	0.386
----- 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 Process - Car Hire Rate Report

Average Car Rental Rates for 11/2020

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	11,286	109	0.060	95
Railroad	Number of Zero-Rated Vehicular Flats	130	.	.	.
Railroad	All Other Cars	379,600	65	0.066	.
Railroad	Number of Zero-Rated Other Cars	15,020	.	.	.
Railroad	Total Railroad Equipment	406,036	.	.	.
		.	.	.	.
Private	Vehicular Flats	53,774	86	0.010	86
Private	Number of Zero-Rated Vehicular Flats	39	.	.	.
Private	Covered Hoppers	433,113	0	0.450	.
Private	Number of Zero-Rated Covered Hoppers	15,743	.	.	.
Private	Tanks	422,993	0	0.928	.
Private	Number of Zero-Rated Tanks	17,082	.	.	.
Private	All Other Cars	296,888	101	0.085	.
Private	Number of Zero-Rated Other Cars	23,367	.	.	.
Private	Total Private Equipment	1,262,999	.	.	.

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 2021			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	21Q1	21Q2	21Q3	21Q4
For Actual	→	20Q3	20Q4	21Q1	21Q2
January	2020	204.3	204.3		
February	2020	204.3	204.3		
March	2020	204.3	204.3		
April	2020	204.4	204.4		
May	2020	204.4	204.4		
June	2020	204.4	204.4		
July	2020	204.4	204.4		
August	2020	204.4	204.4		
September	2020	204.4	204.4		
October	2020	204.4	204.4		
November	2020		204.4		
December	2020		204.6		
January	2021		204.9		
February	2021				
March	2021				
April	2021				
May	2021				
June	2021				
July	2021				
Actual Qtr.		204.4	204.5	NA	NA

1980=100

Actual Qtr.	226.1	226.2	NA	NA
First Mo. next qtr.	226.1	226.7	NA	NA

0.904 =1980



Databases, Tables & Calculators by Subject

Change Output Options:

From: 2020 To: 2021 GO

☐ include graphs ☐ include annual averages

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Data extracted on: February 22, 2021 (7:36:46 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
2020	204.3	204.3	204.3	204.4	204.4	204.4	204.4	204.4	204.4	204.4(P)	204.4(P)	204.6(P)
2021	204.9(P)											

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

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RCAF - Other

Series ID : wpu03t15m05

Not Seasonally Adjusted

Group : Industrial Commodities less fuels

Item : Industrial commodities less fuels

		Forecast Year 2021			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	21Q1	21Q2	21Q3	21Q4
For Actual	→	20Q3	20Q4	21Q1	21Q2
January	2020	207.2	207.2		
February	2020	207.1	207.1		
March	2020	207.1	207.1		
April	2020	205.2	205.2		
May	2020	204.4	204.4		
June	2020	205.0	205.0		
July	2020	205.8	205.8		
August	2020	206.5	207.0		
September	2020	208.4	208.1		
October	2020	208.8	208.8		
November	2020		209.2		
December	2020		211.0		
January	2021		214.5		
February	2021				
March	2021				
April	2021				
May	2021				
June	2021				
July	2021				
Actual Qtr.		206.9	209.7	NA	NA
1980=100					
Actual Qtr.		232.0	235.1	NA	NA
First Mo. next qtr.		234.1	240.5	NA	NA

0.892 =1980



Databases, Tables & Calculators by Subject

Change Output Options:

From: 2020 To: 2021 GO

☐ include graphs ☐ include annual averages

[More Formatting Options](#) ➔

Data extracted on: February 22, 2021 (8:22:44 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
2020	207.2	207.1	207.1	205.2	204.4	205.0	205.8	207.0	208.1	208.8(P)	209.2(P)	211.0(P)
2021	214.5(P)											

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

U.S. BUREAU OF LABOR STATISTICS Postal Square Building 2 Massachusetts Avenue NE Washington, DC 20212-0001

[Telephone:1-202-691-5200](#) [Federal Relay Service:1-800-877-8339](#) [www.bls.gov](#) [Contact Us](#)

All-Inclusive Index (Actual) - 2019 Weights

	19 Wts	3Q/20 18 Wts	3Q/20 19 Wts	% Chg.	4Q/20 19 Wts	% Chg.	1Q/21 19 Wts	% Chg.	2Q/21 19 Wts	% Chg.	3Q/21 19 Wts	% Chg.
Labor	32.6%	442.8	442.8	0.0%	437.1	-1.3%		NA		NA		NA
Fuel	14.2%	159.7	159.7	0.0%	154.9	-3.0%		NA		NA		NA
M&S	4.9%	260.7	260.7	0.0%	258.8	-0.7%		NA		NA		NA
Equipment Rents	5.2%	239.5	239.5	0.0%	236.1	-1.4%	0.0	NA	#DIV/0!	NA	#DIV/0!	NA
Depreciation	15.9%	226.1	226.1	0.0%	226.2	0.0%		NA		NA		NA
Interest	2.5%	57.2	57.2	0.0%	55.7	-2.6%	55.7	0.0%	55.7	0.0%	55.7	0.0%
Other	24.7%	232.0	232.0	0.0%	235.1	1.3%		NA		NA		NA
	1.0000											
Weighted Avg.		287.4	286.9	-0.2%	284.9	-0.7%	1.4	NA	#DIV/0!	NA	#DIV/0!	NA
Linked		267.2			265.3	-0.7%	1.3	NA	#DIV/0!	NA	#DIV/0!	NA
10/1/80	1.027	260.2			258.3	-0.7%	1.3	NA	#DIV/0!	NA	#DIV/0!	NA
10/1/82	1.209	221.0			219.4	-0.7%	1.1	NA	#DIV/0!	NA	#DIV/0!	NA
4Q/87	1.322	202.1			200.7	-0.7%	1.0	NA	#DIV/0!	NA	#DIV/0!	NA
4Q/92	1.569	170.3			169.1	-0.7%	0.8	NA	#DIV/0!	NA	#DIV/0!	NA
4Q/97	1.732	154.3			153.2	-0.7%	0.8	NA	#DIV/0!	NA	#DIV/0!	NA
4Q/02	1.921	139.1			138.1	-0.7%	0.7	NA	#DIV/0!	NA	#DIV/0!	NA
4Q/07	2.459	108.7			107.9	-0.7%	0.5	NA	#DIV/0!	NA	#DIV/0!	NA
4Q/12	2.976	89.8			89.1	-0.8%	0.4	NA	#DIV/0!	NA	#DIV/0!	NA
4Q/17	2.645	101.0			100.3	-0.7%	0.5	NA	#DIV/0!	NA	#DIV/0!	NA
Equipment Rents												
Car Hire	61.4%	223.5	223.5	0.0%	216.3	-3.2%		NA		NA		NA
Lease Rentals	38.6%	232.0	232.0	0.0%	235.1	1.3%	0.0	NA	0.0	NA	0.0	NA
	1.0000											
ER Weighted Avg		227.0	226.8	-0.1%	223.6	-1.4%	0.0	NA	0.0	NA	0.0	NA
ER Linked		239.5			236.1	-1.4%	0.0	NA	#DIV/0!	NA	#DIV/0!	NA