



ENTERED
Office of Proceedings
December 5, 2023
Part of
Public Record

John T. Gray
Senior Vice President - Policy & Economics

December 5, 2023

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 first quarter 2024 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2024-1) *Quarterly Rail Cost Adjustment Factor*. The versions of RCAF-related indices covered in this filing are: the All-Inclusive Index (initiated in the second quarter of 1985), the Unadjusted RCAF (produced since October 1982), the Adjusted RCAF (first published in the second quarter of 1989), and the RCAF-5 (created by the STB in its Ex Parte No. 290 (Sub-No. 7) decision served October 3, 1996). The table below summarizes the first quarter 2024 results and compares to the previous quarter. Both quarters are shown on a 4Q\2022=100 base.

	<u>2023Q4</u>	<u>2024Q1</u>	<u>% Change</u>
All-Inclusive Index	103.0	98.1	-4.8
Preliminary RCAF	1.03	0.981	-4.8
Forecast Error Adjustment	-0.018	-0.007	
RCAF (Unadjusted)	1.012	0.974	-3.8
Productivity Adjustment Factor	2.5256	2.5430	
RCAF (Adjusted)	0.401	0.383	-4.5
PAF-5	2.6384	2.6566	
RCAF-5	0.384	0.367	-4.4

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 Kiara Carter (202 639-2327) of this office.

Sincerely,

A handwritten signature in dark ink, appearing to read "John T. Gray", with a long horizontal flourish extending to the right.

John T. Gray

Attachments

**First Quarter 2024
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2024-1)

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

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

December 5, 2023

Table of Contents

Subject	Page
Introduction	1
Index Weights	2
All-Inclusive Index - First Quarter 2024	3
Forecast vs. Actual All Inclusive Index - Third Quarter 2023	4
Productivity	5
Rail Cost Adjustment Factor - First Quarter 2024	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 first quarter 2024. Each year's first quarter calculation utilizes new health and welfare rates, which are listed in Appendix A on page 5. New payroll tax rates and maximum taxable earnings (Tier I, Tier II, and Unemployment Insurance) also become effective January 1, and are listed in Appendix A on page 4.

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 2022 (current) and 2021 (previous) weights are shown below. Weights calculated from 2021 data were used for the fourth quarter of 2022 through the third quarter of 2023. Beginning with the fourth quarter of 2023, weights calculated using 2022 data are used. The component with the biggest change in weight was Fuel, which increased by 6.2 percentage points. Labor and Depreciation fell by 2 and 2.3 percentage points, respectively. Materials & Supplies increased .2 percentage points. The weight for Other decreased 1.3 percentage point, Equipment Rents decreased by .5 percentage points, and Interest decreased by .3 percentage points.

Weights for RCAF's All-Inclusive Index		
	2022	2021
Labor	29.4 %	31.4 %
Fuel	20.4	14.2
Materials & Supplies	4.7	4.5
Equipment Rents	4.4	4.9
Depreciation	15.2	17.5
Interest	2.1	2.4
Other	23.8	25.1
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

First Quarter 2024

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.

	2022 Weights	Forecast		Percent Change
		Previous 2023Q4	Current 2024Q1	
1. Labor	29.4%	581.2	526.4	-9.4 %
2. Fuel	20.4%	387.9	368.9	-4.9
3. M&S	4.7%	342.5	337.5	-1.5
4. Equipment Rents	4.4%	263.6	266.9	1.3
5. Depreciation	15.2%	238.4	238.4	0.0
6. Interest	2.1%	51.0	51.0	0.0
7. Other	23.8%	283.9	291.6	2.7
8. Weighted Average				
a. 1980 = 100		382.6	364.3	
b. 1980 = 100 (linked)		352.7	335.8 ¹	
c. 4Q22 = 100		103.0	98.1 ²	-4.8

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

$$= (364.3 / 382.6) \times 352.7$$

$$= 335.8$$

² To calculate the 4Q22 = 100 index:

Index4Q22 = (Current Linked Index / 4Q22 Basing Factor) * 100

$$= 335.8 \text{ divided by } 342.3 \text{ times } 100$$

$$= 98.1$$

Indexes based on other periods:

4Q17 based index = $335.8 / 264.5 \times 100 = 127.0$

4Q12 based index = $335.8 / 297.6 \times 100 = 112.8$

4Q07 based index = $335.8 / 245.9 \times 100 = 136.6$

4Q02 based index = $335.8 / 192.1 \times 100 = 174.8$

4Q97 based index = $335.8 / 173.2 \times 100 = 193.9$

4Q92 based index = $335.8 / 156.9 \times 100 = 214.0$

Forecast vs. Actual All-Inclusive Index

Third Quarter 2023

Because of data availability, the forecast error adjustment has a two-quarter lag from each filing. As shown below, the third quarter actual index of 99.5 is 0.7 index points below the forecast value of 100.2. Therefore, the forecast error adjustment for first quarter 2024 is -0.7 index points.

	2021	Third Quarter 2023		Amt
	Weights	Forecast	Actual	Difference
1. Labor	31.4%	584.1	584.1	
2. Fuel	14.2%	330.3	323.5	
3. M&S	4.5%	336.2	336.2	
4. Equipment Rents ¹	4.9%	261.0	257.9	
5. Depreciation	17.5%	237.6	238.2	
6. Interest	2.4%	50.1	50.1	
7. Other	25.1%	287.7	287.6	
8. Weighted Average				
a. 1980 = 100		373.2	372.2	
b. 1980 = 100 (linked)		342.9	340.7 ²	
c. 4Q22 = 100 ³		100.2	99.5	-0.7

Forecast error —————→ **-0.7 index points**

¹	2021	Third Quarter 2023	
	Weights	Forecast	Actual
Car-Hire	68.1%	220.8	221.2
Lease Rentals	31.9%	287.7	287.6
Weighted Average		242.1	242.4
Weighted Average (linked)		261.0	257.9

² Linked actual index = (actual index / previous actual index) x previous linked actual index.
340.7 = 372.2 / 370.2 x 338.9

³ The 4Q22 based indexes are 1980 based indexes divided by the 4Q22 basing factor (342.3/100).
Other basing factors are: 4Q22 = 264.5; 4Q12 = 297.6; 4Q07 = 245.9; 4Q02 = 192.1; 4Q97 = 173.2; and 4Q92 = 156.9.

Productivity

On February 10, 2023, the Surface Transportation Board served a decision which proposed to adopt 2.8 percent as the geometric average productivity change for the five most recent years available. Their five year rolling geometric average calculation added the year 2021 and removed the year 2016. The components of this average annual value are shown on the following table in ratio format – therefore, 1.028 is the same as an increase of 2.8 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			
2017 - 2021			
Year	Output Index (1)	Input Index (2)	Productivity Changes (3)
2017	1.045	0.992	1.053
2018	1.032	1.004	1.028
2019	0.968	0.961	1.007
2020	0.923	0.904	1.021
2021	1.028	0.999	1.029
Average			1.028
Previous Average (2016-2020)			1.025

Calculation of PAF and PAF-5			
For 2017-2021, use fourth root of avg. productivity change = 1.0069			
For 2016-2020, use fourth root of avg. productivity change = 1.0062			
Quarter	Year	PAF	PAF-5
Q1	2023	2.4740	2.5898
Q2	2023	2.4911	2.6059
Q3	2023	2.5083	2.6221
Q4	2023	2.5256	2.6384
Q1	2024	2.5430	2.6566

2016-2020

2017-2021

Rail Cost Adjustment Factor

First Quarter 2024

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 2023Q1 index, the All-Inclusive Index was rebased to a 2022Q4=100 basis as required in the applicable statute.

	Previous 2023Q4	Current 2024Q1	Percent Change
All-Inclusive Index ¹	103.0	98.1	-4.8 %
Preliminary RCAF ²	1.030	0.981	-4.8
Forecast Error Adjustment ³	-0.018	-0.007	
RCAF (Unadjusted) ⁴	1.012	0.974	-3.8
Productivity Adjustment Factor ⁵	2.5256	2.5430	
RCAF (Adjusted) ⁶	0.401	0.383	-4.5
PAF-5 ⁷	2.6384	2.6566	
RCAF-5 ⁸	0.384	0.367	-4.4

¹ See All-Inclusive Index on page 3.

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

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

⁴ Preliminary RCAF plus the forecast error adjustment.

⁵ See Productivity on page 5.

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

⁷ See Productivity on page 5.

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

Appendixes

Labor

First Quarter 2024

The first quarter 2024 Labor Index is 9.4 percent lower than the previous quarter. The decrease in back pay is primarily responsible for this quarter's lower Labor Index.

Wage Rate Index

The Wage Rate Index portion of the Labor Index decreased by 11.5%.

Wage Increases: There are no national wage increases currently scheduled for the first quarter. There were a few increases for independent groups that ultimately rounded to zero and did not have an impact on the wage rate index.

Lump Sums: The first quarter lump sum rate fell 1.8%. One amount was fully amortized and removed, and it was replaced by one new similar amount.

Back Pay: The back pay rate fell from \$6.993 to \$.009. The back pay amount from National Negotiations has now been fully amortized and removed from the rate, and there is one extremely small amount remaining that rounds to zero.

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 first quarter rate is unchanged from the prior quarter.

Labor

First Quarter 2024

Supplements Index

The Supplements Index decreased 6.1 percent this quarter. Health and Welfare premiums, payroll tax rates, maximum taxable earnings, and the rate for unemployment insurance, are all typically adjusted once per year, effective on January 1. All of the components of the supplements index decreased in the first quarter.

Health & Welfare: The Health & Welfare rate decreased 2.8 percent. Employer premiums (the amount the employer contributes for their employees' insurance) remained the same as 223. See pages 4 and 5 of this appendix for details.

Railroad Retirement: The Railroad Retirement rate decreased 6.1 percent. Taxable wages fell significantly, and the maximum taxable earnings for Railroad Retirement's Tier I and Tier II both increased for 2024. Tax rates for employers did not change. Page 4 of this appendix lists tax rates and maximum taxable earnings for 2022 through 2024.

Unemployment Insurance: The Unemployment Insurance rate decreased 91.2%, or 75.5 cents, because of a new unemployment insurance tax rate effective January 1. The weighted average Class I railroad rate for 2024 is 0.66%, compared to 7.79% for 2023. Basic tax rates can range from a minimum of 0.65 percent to a maximum of 12 percent. There was also a surcharge of 1.5 percent applied to the rate for 2024. Page 4 of this appendix lists tax rates for 2022 through 2024.

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 first quarter rate is 32.4 percent higher than last quarter.

Labor Index Calculation

As shown in Table A-1 on the next page, the 11.5 percent decrease in the Wage Rate Index and the 6.1 percent decrease in the Supplements Index combined to cause the Labor Index to be 9.4 percent lower than the previous quarter. The linked first quarter 2024 Labor index is 526.4, which is 3.6 percent lower than one year ago.

Labor

First Quarter 2024

Table A-1 Labor Index

	2023Q4	2024Q1	Change	
			Percent	Amount
<u>Base Wage</u> – Straight Time & Pay For Time Not Worked	\$52.816	\$52.833	0.0%	\$0.017
Adjustments:				
Lump Sum	0.622	0.611	-1.8%	-\$0.011
Back Pay	6.993	0.009	-99.9%	-\$6.984
Other	0.220	0.220	0.0%	\$0.000
Total Wages	<u>60.651</u>	<u>53.673</u>	-11.5%	-\$6.978
Health & Welfare Benefits	9.532	9.261	-2.8%	-\$0.271
RR Retirement & Medicare	12.282	11.527	-6.1%	-\$0.755
Unemployment Insurance	0.432	0.038	-91.2%	-\$0.394
Other	0.182	0.241	32.4%	\$0.059
Total Supplements	<u>\$22.428</u>	<u>\$21.067</u>	-6.1%	-\$1.361
Total Labor (as info only)	\$83.079	\$74.740		
Wage Index¹	519.1	459.3	-11.5%	
Supplements Index²	828.8	778.5	-6.1%	
Total labor Index, 2021 Weights ³	606.1	549.0		
Labor Index (linked)⁴	581.2	526.4	-9.4%	

¹ 1980 wage rate \$11.685

² 1980 supplements rate \$2.706

³ 2022 weights: wages, supplements 71.9% 28.1%

⁴ 2024Q1 linked Index = 2023Q4 linked x (2024Q1 / 2023Q4)
= 581.2 x 549.0 / 606.1

Labor

First Quarter 2024

Supplement Comparisons

Health and Welfare Rates

Plan	Railroad Payment Per Employee Per Month				
	2022	2023	2024	Change	
				'22-'23	'23-'24
Group Health & Welfare	\$1,856.96	\$1,972.43	\$1,972.43	6.2%	0.0%
Early Retirement Major Medical	84.14	65.94	48.95	-21.6%	-25.8%
Group Dental	75.01	69.10	69.15	-7.9%	0.1%
Group Vision	8.51	8.51	8.56	0.0%	0.6%
Supplemental Sickness					
Maintenance of Way	48.22	48.22	30.00	0.0%	-37.8%
Shop Crafts	98.52	98.52	50.00	0.0%	-49.2%
Signalmen	62.17	62.17	30.00	0.0%	-51.7%
Yardmasters	74.61	76.77	61.75	2.9%	-19.6%

Railroad Retirement and Medicare

	Earnings Base			Employer Rate		
	2022	2023	2024	2022	2023	2024
Tier I	\$147,000	\$160,200	\$168,600	6.20%	6.20%	6.20%
Tier II	109,200	118,800	125,100	13.10%	13.10%	13.10%
Medicare	no limit	no limit	no limit	1.45%	1.45%	1.45%

Unemployment Insurance

Monthly Taxable Earnings Base			Weighted Avg. Class I Rate		
2022	2023	2024	2022	2023	2024
\$1,755	\$1,895	\$1,985	11.23%	7.79%	0.66%

Labor
First Quarter 2024

NATIONAL RAILWAY LABOR CONFERENCE
EMPLOYEE BENEFITS DEPARTMENT

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

David B. Marcus
Managing Director of Benefits
(571) 336-7596
dmarcus@nrlc.org

Eureka Norment
National Health Plan Manager
(571) 336-7629
enorment@nrlc.org

Paul Winters
Director of Benefits
(571) 336-7623
pwinters@nrlc.org

Ryan Rabac
Health Comm. Manager
(571) 336-7625
rrabac@nrlc.org

November 2, 2023

Ms. Kiara Williams
Director, Financial Reporting
Association of American Railroads
425 Third Street, SW, Suite 1000
Washington, D.C. 20024

Dear Ms. Williams:

The revised employer monthly Payment Rates which are effective January 1, 2024 are as follows:

Railroad Employees National Health & Welfare Plan & SMART-TD H&W Plan	
Non-Hospital Road	\$1,972.43
Railroad Employees National Early Retirement Major Medical Benefit Plan	
Non-Hospital Road	\$ 48.95
Aetna - National Dental Plan	\$ 69.15
The Hartford - Supplemental Sickness Plans	
Shop Craft	\$ 50.00
Signalmen	\$ 30.00
Maintenance of Way	\$ 30.00
Trustmark - Supplemental Sickness Plans	
Yardmasters	\$ 61.75
EyeMed - National Vision Plan	\$ 8.56

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

Very truly yours,

Eureka Norment

Eureka Norment

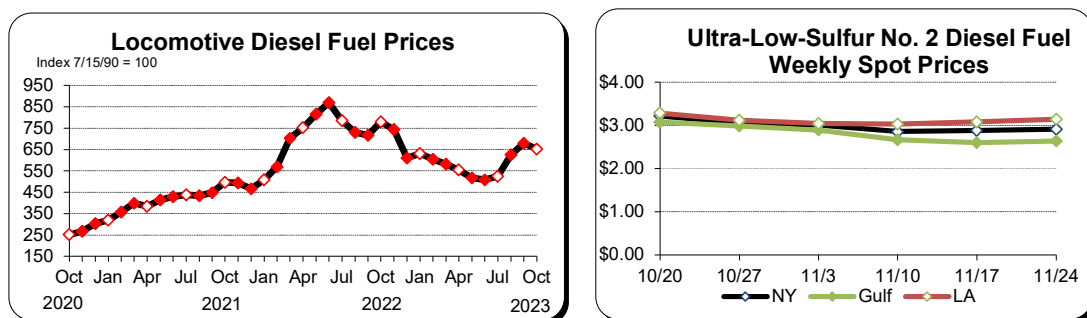
CC: Data@aar.org

Fuel

First Quarter 2024

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 peak point in June 2022, but has declined since then. While average prices for locomotive diesel fuel are available only through October 2023, data through four weeks of November are available for related fuel types. According to the Energy Information Administration, the daily spot price as of November 27 for Ultra-Low-Sulfur Diesel Fuel* is an average of 8.7 percent lower than the average for October. The chart below (on left) shows the AAR's Monthly Locomotive Diesel Fuel Price Index through October 2023. 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 November are lower than prices that actually occurred in October. Railroads that responded to the AAR's forecast survey expect prices to decrease by January (Q1) compared to prices that actually occurred for October (Q4). The fourth quarter 2023 forecast is 4.9 percent lower than the previous quarter forecast, and 8.3 percent lower than the prior quarter actual.

Forecast Fuel Index (1980 = 100)	368.9
Change from previous quarter forecast	-4.9%
Change from previous quarter actual	-8.3%

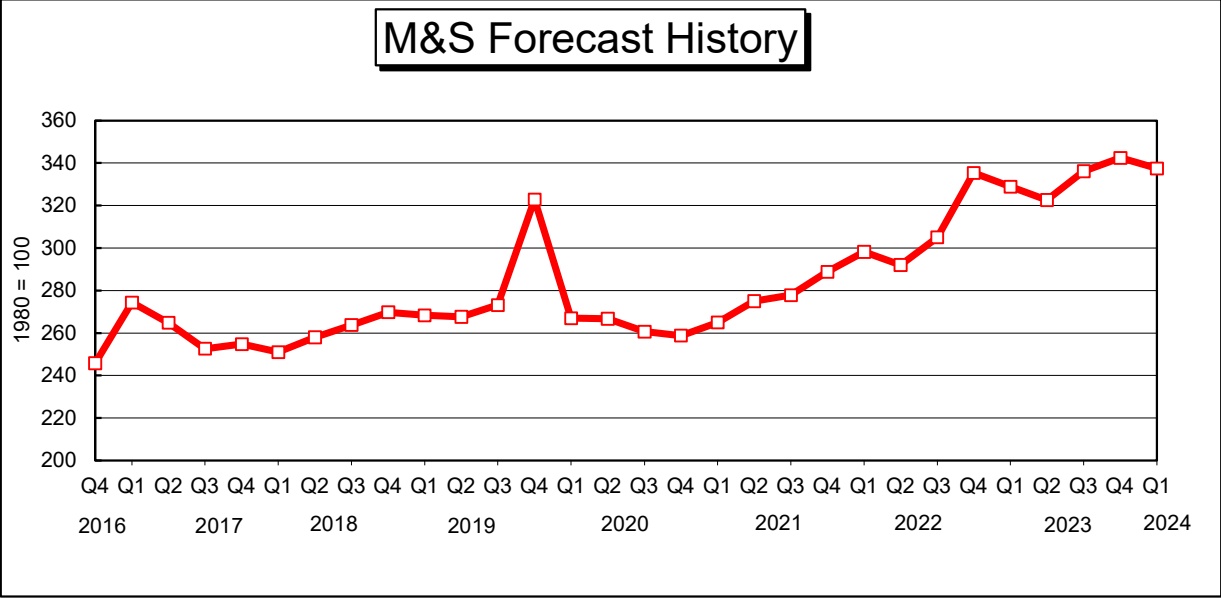
* Heating oil, Ultra-Low-Sulfur No. 2 Diesel Fuel, and locomotive diesel fuel are part of a group of closely related products, commonly labeled as distillates, that differ mostly by their sulfur content. Because of these similarities, these fuels are produced together and have similar pricing trends.

Materials & Supplies

First Quarter 2024

The first quarter 2024 Materials & Supplies Index decreased 1.5 percent from the previous quarter. Prices decreased for Miscellaneous Products and Metal, but decreased for Forest Products.

2024Q1	Materials & Supplies Index =	337.5
2023Q4	Materials & Supplies Index =	342.5
Difference		-5.0 basis points
		or
		-1.5 %



Equipment Rents

First Quarter 2024

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 calculates the Equipment Rents Index. The first quarter Car Hire portion of the Index increased 0.4 percent as the latest rates for autoracks were higher compared to three months ago. A 2.7 percent increase in the projected PPI-LF (See Appendix G) used as a proxy for Lease Rentals, combined with the 0.4 percent increase for Car Hire, caused the Equipment Rents Index to increase by 1.27 percent – rounded to 1.3 percent in the table below.

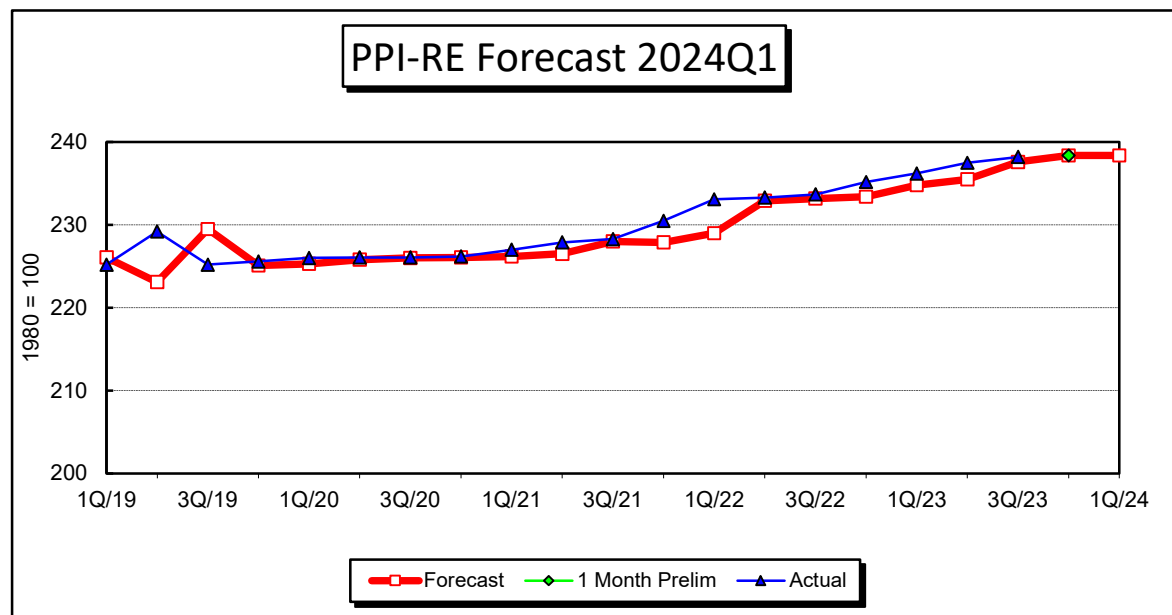
	2022			Percent
	Weight	2023Q4	2024Q1	Change
Car Hire	68.1%	226.1	227.0	0.4 %
Lease Rentals	31.9%	283.9	291.6	2.7
Weighted Average		244.5	247.6	1.3
Weighted Average (Linked)		263.6	266.9	1.3

Depreciation

First Quarter 2024

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 remained unchanged from the previous quarter's forecast.

Forecast of Depreciation Index (1982=100)	215.5
Forecast of Depreciation Index (1980=100)	238.4
Change from previous quarter forecast	0.0% = 0.00%
Change from actual first month of previous quarter	0.0% = 0.00%
Change from same quarter of prior year (actual)	1.4%



Depreciation

First Quarter 2024

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 1.37 and for Box-Jenkins was 1.35.
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, 1, 0)

Within-Sample Statistics

Sample size	72	No. parameters	0
Mean	206.78	Std. deviation	4.48
R-square	0.97	Adj. R-square	0.97
Durbin-Watson	2.14	Ljung-Box(18)	16.2 P=0.42
Forecast error	0.81	BIC	0.81
MAPE	18.00%	SMAPE	18.00%
RMSE	0.81	MAD	0.38
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2023-May	214.7
2023-Jun	214.7
2023-Jul	215.4
2023-Aug	215
2023-Sep	215.4
2023-Oct	215.5

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2023-Nov	213.910	215.500	217.09
2023-Dec	213.252	215.500	217.748
2024-Jan	212.746	215.500	218.254
2024-Feb	212.320	215.500	218.68
2024-Mar	211.945	215.500	219.055
QTR AVG	212.337	215.500	218.663

Interest

First Quarter 2024

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 2022 data, and was updated in the Q4 filing submitted on September 5, 2023. The Interest Index based on 2022 increased from 50.1 in 2021 to 51.0 in 2022.

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

2022	Interest Rate	4.00%
1980	Interest Rate	7.85%
2024Q1	Interest Index	51.0
2023Q4	Interest Index	51.0
	Percent Change	0.0%

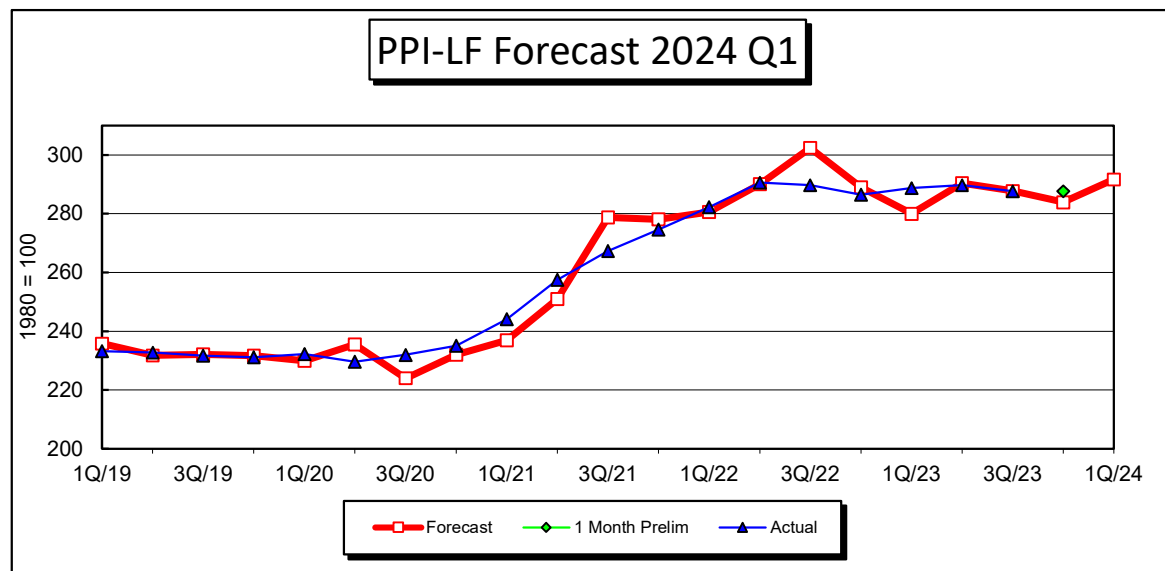
Other Expenses

First Quarter 2024

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 2.7 percent higher than the prior quarter forecast.

Forecast of Other Expense Index (1982=100)	260.1
Forecast of Other Expense Index (1980=100)	291.6
Change from previous quarter forecast	2.7%
Change from actual first month of previous quarter	1.4%
Change from same quarter of prior year (actual)	1.0%



Other Expenses

First Quarter 2024

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 4.57 and for Box-Jenkins was 4.50.

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]	0.4265	0.1152	3.701	0.9997

Within-Sample Statistics

Sample size	72	No. parameters	1
Mean	226.36	Std. deviation	22.87
R-square	1	Adj. R-square	1
Durbin-Watson	2.14	Ljung-Box(18)	21.3 P=0.73
Forecast error	0.84	BIC	0.86
MAPE	0.27	SMAPE	0.27
RMSE	0.83	MAD	0.62
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2023-May	258.6
2023-Jun	257.7
2023-Jul	256.7
2023-Aug	256.4
2023-Sep	256.3
2023-Oct	256.5

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2023-Nov	255.471	257.127	258.782
2023-Dec	253.924	257.625	261.326
2024-Jan	252.911	259.105	265.298
2024-Feb	251.091	260.158	269.224
2024-Mar	248.722	260.997	273.273
QTR AVG	250.908	260.087	269.265

Railroad and Union Abbreviations

First Quarter 2024

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.)
CMQ	Central Maine & Quebec (Part of Canadian Pacific's U.S. operations, included beginning 2021Q4.)
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 2024 Q1 RCAF

December 5, 2023

- 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 . 2024/Q1 RCAF Lump Sum Amortization summary, public version (1 page)
- 7 . 2024/Q1 RCAF Back Pay Amortization summary, public version (1 page)
- 8 . Health & Welfare worksheet (1 page) and NRLC H&W Rates for 2024 (1 page)
- 9 . Railroad Retirement spreadsheet (5 pages)
- 10 . 2024 Tax Rates and Maximum Taxable Earnings from Railroad Retirement Board
- 11 . Unemployment Insurance Tax worksheet (1 page)
- 12 . Unemployment Insurance Tax Rate for 2024 memo and RRB Maximum Taxable Earnings (2 pages)
- 13 . 2-page SAS run for 2024 Q1 Unemployment Insurance Tax
- 14 . 3 pages from EIA including spot prices for various distillates
- 15 . Summary of Materials & Supplies - "U.S. Summary by Composition Category" (1 page)
- 16 . RCAF Car Hire Forecast Spreadsheet for Equipment Rents (2 pages) plus source data page
- 17 . 6 pages of PPI-RE for Depreciation including graph page, input/output, and BLS source data
- 18 . 6 pages of PPI-LF for Other (and Lease Rentals) incl. graph page, input/output, BLS source data
- 19 . Forecast Error calc. and workpapers (7 pages: calc, fuel, 3 car hire, 2 deprec, 2 other, actual)

RCAF All-Inclusive Index's Labor Index Based on 2022 Benchmarks

	22 Wts.	3Q/23	3Q/23 Rebenchd As Info Only	% Chg	4Q/23	% Chg	1Q/24	% Chg	2Q/24	% Chg	3Q/24	% Chg
Straight Time		\$44.251	\$43.997	-0.6%	\$43.997	-0.6%	\$44.011	0.0%		--		--
PFTNW		\$8.495	\$8.819	3.8%	\$8.819	3.8%	\$8.822	0.0%		--		--
Total		\$52.746	\$52.816	0.1%	\$52.816	0.1%	\$52.833	0.0%	\$0.000	--	\$0.000	--
Adjustments												
Lump Sum		\$0.161	\$0.160		\$0.622		\$0.611					
Back Pay		\$7.057	\$7.002		\$6.993		\$0.009					
Other		\$0.222	\$0.220		\$0.220		\$0.220					
Total Wages		\$60.186	\$60.198	0.0%	\$60.651	0.8%	\$53.673	-11.5%	\$0.000	--	\$0.000	--
Pre-Tax Reduction		(\$1.444)	(\$1.092)		(\$1.092)		(\$1.092)					
Taxable Wages		\$58.742	\$59.106		\$59.559		\$52.581		\$0.000		\$0.000	
H & W		\$9.530	\$9.532	0.0%	\$9.532	0.0%	\$9.261	-2.8%		--		--
RR Ret & Medicare		\$12.253	\$12.216	-0.3%	\$12.282	0.2%	\$11.527	-6.1%		--		--
Unemp. Insurance		\$0.876	\$0.432	-50.7%	\$0.432	-50.7%	\$0.038	-91.2%		--		--
Other		\$0.335	\$0.333	-0.6%	\$0.182	-45.7%	\$0.241	32.4%		--		--
Total		\$22.994	\$22.513	-2.1%	\$22.428	-2.5%	\$21.067	-6.1%	\$0.000	--	\$0.000	--
Adjustments												
Total Supplements		\$22.994	\$22.513	-2.1%	\$22.428	-2.5%	\$21.067	-6.1%	\$0.000	--	\$0.000	--
Total Labor		\$83.180	\$82.711	-0.6%	\$83.079	-0.1%	\$74.740	-10.0%	\$0.000	--	\$0.000	--
Wage Rate Index	0.7190	515.1	515.2	0.0%	519.1	0.8%	459.3	-11.5%	0.0	--	0.0	--
Supplements Index	0.2810	849.7	832.0	-2.1%	828.8	-2.5%	778.5	-6.1%	0.0	--	0.0	--
Total Labor Index '21 Wts.		614.1										
Total Labor Index '22 Wts.		609.1	604.2	-0.8%	606.1	-0.5%	549.0	-9.4%	0.0	--	0.0	--
Labor Index (Linked)		584.1			581.2	-0.5%	526.4	-9.4%	0.0	-100.0%	#DIV/0!	--

All Inclusive Index and RCAF using 2022 Benchmarks and Weights

	22 Wts.	3Q/23	22 Wts. 3Q/23	% Chg	4Q/23	% Chg	1Q/24	% Chg	2Q/24	% Chg	3Q/24	% Chg
Labor	0.294	584.10	584.1	0.0%	581.2	-0.5%	526.4	-9.4%	0.0	-100.0%	#DIV/0!	--
Fuel	0.204	330.30	330.3	0.0%	387.9	17.4%	368.9	-4.9%		--		--
M&S	0.047	336.20	336.2	0.0%	342.5	1.9%	337.5	-1.5%		--		--
Equip. Rents	0.044	261.00	261.0	0.0%	263.6	1.0%	266.9	1.3%	0.0	-100.0%	#DIV/0!	--
Depreciation	0.152	237.60	237.6	0.0%	238.4	0.3%	238.4	0.0%		--		--
Interest	0.021	50.10	50.1	0.0%	51.0	1.8%	51.0	0.0%	51.0	0.0%	51.0	0.0%
Other	0.238	287.70	287.7	0.0%	283.9	-1.3%	291.6	2.7%		--		--
Weighted Avg.	1.000	373.20	372.0	-0.3%	382.6	2.8%	364.3	-4.8%	1.1	-99.7%	#DIV/0!	--
Linked		342.90			352.7	2.9%	335.8	-4.8%	1.0	-99.7%	#DIV/0!	--
Basing Factor												
10/1/80 basis	102.7	333.9			343.4	2.8%	327.0	-4.8%	1.0	-99.7%	#DIV/0!	--
10/1/82	120.9	283.6			291.7	2.9%	277.8	-4.8%	0.8	-99.7%	#DIV/0!	--
4Q/87	132.2	259.4			266.8	2.9%	254.0	-4.8%	0.8	-99.7%	#DIV/0!	--
4Q/92	156.9	218.5			224.8	2.9%	214.0	-4.8%	0.6	-99.7%	#DIV/0!	--
4Q/97	173.2	198.0			203.6	2.8%	193.9	-4.8%	0.6	-99.7%	#DIV/0!	--
4Q/02	192.1	178.5			183.6	2.9%	174.8	-4.8%	0.5	-99.7%	#DIV/0!	--
4Q/07	245.9	139.4			143.4	2.9%	136.6	-4.7%	0.4	-99.7%	#DIV/0!	--
4Q/12	297.6	115.2			118.5	2.9%	112.8	-4.8%	0.3	-99.7%	#DIV/0!	--
4Q/17	264.5	129.6			133.3	2.9%	127.0	-4.7%	0.4	-99.7%	#DIV/0!	--
4Q/22 basis	342.3	100.2		103.0	2.8%	98.1	-4.8%	0.3	-99.7%	#DIV/0!	--	
Car Hire	0.681	220.80	220.8	0.0%	226.1	2.4%	227.0	0.4%		--		--
Lease Rents	0.319	287.70	287.7	0.0%	283.9	-1.3%	291.6	2.7%	0.0	--	0.0	--
Weighted Avg Eq Rents		242.10	242.1	0.0%	244.5	1.0%	247.6	1.3%	0.0	--	0.0	--
Linked Equipment Rents		261.00			263.6	1.0%	266.9	1.3%	0.0	-100.0%	#DIV/0!	--
Preliminary RCAF		1.002			1.030	2.79%	0.981	-4.8%	0.003	-99.7%	#DIV/0!	--
Forecast Error Adj.		(0.027)			(0.018)		(0.007)					
RCAF Unadjusted		0.975			1.012	3.79%	0.974	-3.8%	0.003	-99.7%	#DIV/0!	--
PAF		2.5083			2.5256	0.69%	2.5430	0.69%		--		--
RCAF Adjusted		0.389			0.401	3.08%	0.383	-4.5%	#DIV/0!	--	#DIV/0!	--
PAF-5		2.6221			2.6384	0.62%	2.6566	0.69%		--		--
RCAF-5		0.372			0.384	3.23%	0.367	-4.4%	#DIV/0!	--	#DIV/0!	--

Hourly Rate for 2024 Q1

Straight Time and Time Paid For But Not Worked

2023Q3 Straight Time Hourly Rate (from national spreadsheet)	\$43.985
Rebenchmark	

Adjustments to 2022 base:

Added 2023Q1

Miscellaneous Independents	Nothing	0.000
Soo Corp.	12 new GWIs	0.003

Added 2023Q2

Miscellaneous Independents	Nothing	0.006
Soo Corp.	12 new GWIs	0.008

Added 2023Q3

Miscellaneous Independents	Nothing	0.005
Soo Corp.	12 new GWIs	0.002

Added 2023Q4

Miscellaneous Independents	Nothing	0.000
Soo Corp.	12 new GWIs	0.000

Added 2024Q1

Miscellaneous Independents	Nothing	0.000
Soo Corp.	12 new GWIs	0.003

Adjusted STHR Total	\$44.011
----------------------------	-----------------

Pay For Time Not Worked

PFTNW (from national spreadsheet)				\$8.817
Ratio Adj STHR to Nat STHR	44.011	/	43.985	= 1.00059

Adjusted Pay For Time Not Worked	\$8.822
---	----------------

Adjusted STHR + Adjusted Pay For Time Not Worked	\$52.833
---	-----------------

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, DM&E, and CMQ.
3. National Wage Increases are not fully captured in 2022 wage statistics due to the timing of implementation.
It's estimated that 4.2% of the 14.1% GWI was captured in 2022. Therefore, 9.9% GWI was applied in Q1 2023.

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 1Q/2024

U.S. ST Hours = 224,778,198
 Wage Statistics are for 2022

Union Group	Employees	Mo. Rate	Annual \$
National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,439	(\$309.21)	(\$5,339,438.28)
National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	19,976	(\$309.21)	(\$74,121,347.52)
National BMW (All except SOO, DME, DH)	18,935	(\$309.21)	(\$70,258,696.20)
National BRS (All except DME)	5,575	(\$309.21)	(\$20,686,149.00)
National IAM (BNSF, CSX, KCS, NS, SOO, UP)	4,553	(\$309.21)	(\$16,893,997.56)
National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	585	(\$309.21)	(\$2,170,654.20)
National IBEW (All except DME)	3,796	(\$309.21)	(\$14,085,133.92)
National NCFO (All except DME and WC)	1,484	(\$309.21)	(\$5,506,411.68)
National SMW (BNSF, CSX, KCS, NS, UP, IC)	529	(\$309.21)	(\$1,962,865.08)
National TCU (All except DME and DH)	3,660	(\$309.21)	(\$13,580,503.20)
National TCU-CAR (All except DME)	5,777	(\$309.21)	(\$21,435,674.04)
National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	29,529	(\$309.21)	(\$109,567,945.08)
Yardmasters (BNSF, CSX, KCS, NS, UP, SOO, DH)	1,262	(\$309.21)	(\$4,682,676.24)
Misc Indep (DME, CMQ, portions of DH & SOO, portions of CN)	4,451	(\$299.75)	(\$16,010,247.00)
Total Union	101,551		(\$376,301,739.00)
All Other @ -\$10,896,344.69 total per month			\$130,756,136.28
Total			(\$245,545,602.72)

Reduction in Wage Rate Per ST Hour	-\$1.09239065
Deduct this amount from the Wage Rate	-\$1.092

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
	0.234585	0.02934	0.178029	0.004122	0.046441	0.15670	0.046558	0.011721	0.036378	0.00449	0.030637	0.015152	0.009434	0.196411	1.00000
2022 Avg.	33.787	35.166	36.339	37.153	36.257	31.383	37.022	32.023	37.798	33.854	37.768	47.093	46.175	58.700	540.518
12/31/22	33.787	35.166	36.339	37.153	36.257	31.383	37.022	32.023	37.798	33.854	37.768	47.093	46.175	58.700	540.518
1/1/23	37.056	38.585	39.849	40.831	39.775	34.402	40.613	35.154	41.496	37.009	41.443	50.324	49.525	58.700	
4/1/23	37.056	38.585	39.849	40.831	39.775	34.402	40.613	35.154	41.496	37.009	41.443	50.324	49.525	58.700	
7/1/23	38.505	40.101	41.404	42.464	41.334	35.740	42.204	36.544	43.136	38.403	43.072	51.718	50.976	61.049	
10/1/23	38.505	40.101	41.404	42.464	41.334	35.740	42.204	36.544	43.136	38.403	43.072	51.718	50.976	61.049	
1/1/24	38.505	40.101	41.404	42.464	41.334	35.740	42.204	36.544	43.136	38.403	43.072	51.718	50.976	61.049	
4/1/24	38.505	40.101	41.404	42.464	41.334	35.740	42.204	36.544	43.136	38.403	43.072	51.718	50.976	61.049	
7/1/24	40.198	41.874	43.222	44.375	43.157	37.303	44.064	38.168	45.054	40.030	44.976	53.331	52.657	63.796	

Weighted Straight Time Hourly Rate															
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Total
2022 Avg.	7.926	1.032	6.469	0.153	1.684	4.918	1.724	0.375	1.375	0.152	1.157	0.714	0.436	11.529	39.644
12/31/22	7.926	1.032	6.469	0.153	1.684	4.918	1.724	0.375	1.375	0.152	1.157	0.714	0.436	11.529	39.644
1/1/23	8.693	1.132	7.094	0.168	1.847	5.391	1.891	0.412	1.510	0.166	1.270	0.762	0.467	11.529	42.333
4/1/23	8.693	1.132	7.094	0.168	1.847	5.391	1.891	0.412	1.510	0.166	1.270	0.762	0.467	11.529	42.333
7/1/23	9.033	1.177	7.371	0.175	1.920	5.601	1.965	0.428	1.569	0.172	1.320	0.784	0.481	11.991	43.985
10/1/23	9.033	1.177	7.371	0.175	1.920	5.601	1.965	0.428	1.569	0.172	1.320	0.784	0.481	11.991	43.985
1/1/24	9.033	1.177	7.371	0.175	1.920	5.601	1.965	0.428	1.569	0.172	1.320	0.784	0.481	11.991	43.985
4/1/24	9.033	1.177	7.371	0.175	1.920	5.601	1.965	0.428	1.569	0.172	1.320	0.784	0.481	11.991	43.985
7/1/24	9.430	1.229	7.695	0.183	2.004	5.845	2.052	0.447	1.639	0.180	1.378	0.808	0.497	12.530	45.916

Note: The 2022 Average and 12/31/22 Straight Time Hourly Rates are the industry rates, and include all Class I railroad employees. The rates for 1/1/23 through 7/1/24 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 2022 are not shown on this page and are handled separately.

National Contracts U.S.

Pay For Time Not Worked Hourly Rate															Check
Weight	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	Sum
	0.234585	0.02934	0.178029	0.004122	0.046441	0.15670	0.046558	0.011721	0.036378	0.00449	0.030637	0.015152	0.009434	0.196411	1.00000
2022 Avg.	12.292	4.441	13.329	5.720	8.537	5.314	4.694	3.860	5.191	4.717	6.027	10.331	7.933	1.205	93.593
12/31/22	12.292	4.441	13.329	5.720	8.537	5.314	4.694	3.860	5.191	4.717	6.027	10.331	7.933	1.205	
1/1/23	13.481	4.873	14.616	6.286	9.365	5.825	5.150	4.237	5.699	5.157	6.614	11.040	8.509	1.205	
4/1/23	13.481	4.873	14.616	6.286	9.365	5.825	5.150	4.237	5.699	5.157	6.614	11.040	8.509	1.205	
7/1/23	14.008	5.065	15.187	6.538	9.733	6.052	5.351	4.405	5.925	5.351	6.874	11.346	8.758	1.253	
10/1/23	14.008	5.065	15.187	6.538	9.733	6.052	5.351	4.405	5.925	5.351	6.874	11.346	8.758	1.253	
1/1/24	14.008	5.065	15.187	6.538	9.733	6.052	5.351	4.405	5.925	5.351	6.874	11.346	8.758	1.253	
4/1/24	14.008	5.065	15.187	6.538	9.733	6.052	5.351	4.405	5.925	5.351	6.874	11.346	8.758	1.253	
7/1/24	14.624	5.289	15.854	6.832	10.162	6.316	5.587	4.600	6.188	5.578	7.178	11.700	9.047	1.310	

Pay For Time Not Worked Hourly Rate															Total
	UTU	TCU	BLET	SMWIA	BRS	BMWE	TCU-CAR	NCFO	IAM	IBBM	IBEW	ATDA	YDMSTRS	OTHER	
2022 Avg.	2.883	0.130	2.373	0.024	0.396	0.833	0.219	0.045	0.189	0.021	0.185	0.157	0.075	0.237	7.766
12/31/22	2.883	0.130	2.373	0.024	0.396	0.833	0.219	0.045	0.189	0.021	0.185	0.157	0.075	0.237	7.766
1/1/23	3.162	0.143	2.602	0.026	0.435	0.913	0.240	0.050	0.207	0.023	0.203	0.167	0.080	0.237	8.488
4/1/23	3.162	0.143	2.602	0.026	0.435	0.913	0.240	0.050	0.207	0.023	0.203	0.167	0.080	0.237	8.488
7/1/23	3.286	0.149	2.704	0.027	0.452	0.948	0.249	0.052	0.216	0.024	0.211	0.172	0.083	0.246	8.817
10/1/23	3.286	0.149	2.704	0.027	0.452	0.948	0.249	0.052	0.216	0.024	0.211	0.172	0.083	0.246	8.817
1/1/24	3.286	0.149	2.704	0.027	0.452	0.948	0.249	0.052	0.216	0.024	0.211	0.172	0.083	0.246	8.817
4/1/24	3.286	0.149	2.704	0.027	0.452	0.948	0.249	0.052	0.216	0.024	0.211	0.172	0.083	0.246	8.817
7/1/24	3.431	0.155	2.822	0.028	0.472	0.990	0.260	0.054	0.225	0.025	0.220	0.177	0.085	0.257	9.202

U.S. National Contract

UTU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				33.78694	12.29156
12/31/22 Industry Rate				33.78694	12.29156
1/1/23	9.90%		97.738%	37.05620	13.48091
4/1/23			97.738%	37.05620	13.48091
7/1/23	4.00%		97.738%	38.50493	14.00795
10/1/23			97.738%	38.50493	14.00795
1/1/24			97.738%	38.50493	14.00795
4/1/24			97.738%	38.50493	14.00795
7/1/24	4.50%		97.738%	40.19846	14.62405

TCU

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				35.16556	4.44148
12/31/22 Industry Rate				35.16556	4.44148
1/1/23	9.90%		98.224%	38.58511	4.87338
4/1/23			98.224%	38.58511	4.87338
7/1/23	4.00%		98.224%	40.10111	5.06486
10/1/23			98.224%	40.10111	5.06486
1/1/24			98.224%	40.10111	5.06486
4/1/24			98.224%	40.10111	5.06486
7/1/24	4.50%		98.224%	41.87361	5.28873

BLET

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				36.33885	13.32886
12/31/22 Industry Rate				36.33885	13.32886
1/1/23	9.90%		97.573%	39.84909	14.61640
4/1/23			97.573%	39.84909	14.61640
7/1/23	4.00%		97.573%	41.40437	15.18686
10/1/23			97.573%	41.40437	15.18686
1/1/24			97.573%	41.40437	15.18686
4/1/24			97.573%	41.40437	15.18686
7/1/24	4.50%		97.573%	43.22235	15.85369

U.S. National Contract

SMWIA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				37.15286	5.72015
12/31/22 Industry Rate				37.15286	5.72015
1/1/23	9.90%		100.000%	40.83099	6.28645
4/1/23			100.000%	40.83099	6.28645
7/1/23	4.00%		100.000%	42.46423	6.53790
10/1/23			100.000%	42.46423	6.53790
1/1/24			100.000%	42.46423	6.53790
4/1/24			100.000%	42.46423	6.53790
7/1/24	4.50%		100.000%	44.37512	6.83211

BRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				36.25671	8.53716
12/31/22 Industry Rate				36.25671	8.53716
1/1/23	9.90%		98.007%	39.77460	9.36550
4/1/23			98.007%	39.77460	9.36550
7/1/23	4.00%		98.007%	41.33388	9.73265
10/1/23			98.007%	41.33388	9.73265
1/1/24			98.007%	41.33388	9.73265
4/1/24			98.007%	41.33388	9.73265
7/1/24	4.50%		98.007%	43.15684	10.16190

BMWE

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				31.38295	5.31386
12/31/22 Industry Rate				31.38295	5.31386
1/1/23	9.90%		97.181%	34.40228	5.82511
4/1/23			97.181%	34.40228	5.82511
7/1/23	4.00%		97.181%	35.73958	6.05154
10/1/23			97.181%	35.73958	6.05154
1/1/24			97.181%	35.73958	6.05154
4/1/24			97.181%	35.73958	6.05154
7/1/24	4.50%		97.181%	37.30252	6.31618

U.S. National Contract

TCU-Carmen

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				37.02232	4.69445
12/31/22 Industry Rate				37.02232	4.69445
1/1/23	9.90%		97.957%	40.61265	5.14971
4/1/23			97.957%	40.61265	5.14971
7/1/23	4.00%		97.957%	42.20396	5.35149
10/1/23			97.957%	42.20396	5.35149
1/1/24			97.957%	42.20396	5.35149
4/1/24			97.957%	42.20396	5.35149
7/1/24	4.50%		97.957%	44.06434	5.58738

NCFO

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				32.02288	3.85981
12/31/22 Industry Rate				32.02288	3.85981
1/1/23	9.90%		98.781%	35.15449	4.23728
4/1/23			98.781%	35.15449	4.23728
7/1/23	4.00%		98.781%	36.54353	4.40470
10/1/23			98.781%	36.54353	4.40470
1/1/24			98.781%	36.54353	4.40470
4/1/24			98.781%	36.54353	4.40470
7/1/24	4.50%		98.781%	38.16794	4.60050

IAM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				37.79823	5.19144
12/31/22 Industry Rate				37.79823	5.19144
1/1/23	9.90%		98.817%	41.49599	5.69932
4/1/23			98.817%	41.49599	5.69932
7/1/23	4.00%		98.817%	43.13619	5.92459
10/1/23			98.817%	43.13619	5.92459
1/1/24			98.817%	43.13619	5.92459
4/1/24			98.817%	43.13619	5.92459
7/1/24	4.50%		98.817%	45.05435	6.18804

U.S. National Contract

IBBM

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				33.85380	4.71701
12/31/22 Industry Rate				33.85380	4.71701
1/1/23	9.90%		94.144%	37.00908	5.15665
4/1/23			94.144%	37.00908	5.15665
7/1/23	4.00%		94.144%	38.40275	5.35084
10/1/23			94.144%	38.40275	5.35084
1/1/24			94.144%	38.40275	5.35084
4/1/24			94.144%	38.40275	5.35084
7/1/24	4.50%		94.144%	40.02969	5.57753

IBEW

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				37.76845	6.02731
12/31/22 Industry Rate				37.76845	6.02731
1/1/23	9.90%		98.263%	41.44259	6.61365
4/1/23			98.263%	41.44259	6.61365
7/1/23	4.00%		98.263%	43.07150	6.87360
10/1/23			98.263%	43.07150	6.87360
1/1/24			98.263%	43.07150	6.87360
4/1/24			98.263%	43.07150	6.87360
7/1/24	4.50%		98.263%	44.97606	7.17754

ATDA

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				47.09313	10.33127
12/31/22 Industry Rate				47.09313	10.33127
1/1/23	9.90%		69.291%	50.32364	11.03998
4/1/23			69.291%	50.32364	11.03998
7/1/23	4.00%		69.291%	51.71843	11.34597
10/1/23			69.291%	51.71843	11.34597
1/1/24			69.291%	51.71843	11.34597
4/1/24			69.291%	51.71843	11.34597
7/1/24	4.50%		69.291%	53.33106	11.69975

YDMSTRS

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				46.17529	7.93340
12/31/22 Industry Rate				46.17529	7.93340
1/1/23	9.90%		73.271%	49.52478	8.50887
4/1/23			73.271%	49.52478	8.50887
7/1/23	4.00%		73.271%	50.97628	8.75826
10/1/23			73.271%	50.97628	8.75826
1/1/24			73.271%	50.97628	8.75826
4/1/24			73.271%	50.97628	8.75826
7/1/24	4.50%		73.271%	52.65708	9.04703

OTHER

	Percentage Increase	Cents Increase	Applicable	ST HR	PFTNW HR
2022 Industry Avg.				58.70050	1.20501
12/31/22 Industry Rate				58.70050	1.20501
1/1/23			100.000%	58.70050	1.20501
4/1/23			100.000%	58.70050	1.20501
7/1/23	4.00%		100.000%	61.04852	1.25321
10/1/23			100.000%	61.04852	1.25321
1/1/24			100.000%	61.04852	1.25321
4/1/24			100.000%	61.04852	1.25321
7/1/24	4.50%		100.000%	63.79570	1.30960

Check Sums

	Increase	Applicable	ST HR	PFTNW HR
2022 AVG			540.51845	93.59280
12/31/22			540.51845	
		1319.249%		
		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.

National Wage Increases are not fully captured in 2022 wage statistics due to the timing of implementation. It's estimated that 4.2% of the 14.1% GWI was captured in 2022. Therefore, 9.9% GWI was applied in Q1 2023.



DTCC GCF Repo Index

	LATEST	VALUE TRADED (BILLIONS)	52-WEEK	
			HIGH	LOW
Treasury	5.393	30.886	5.399	3.804
MBS	5.418	47.740	5.426	3.854

Secondary Market

Tuesday, November 28, 2023

Fannie Mae 30-year Mortgage Yields

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
30 days	6.632	6.644	7.495	5.244
60 days	6.643	6.654	7.554	5.250

U.S. Government Rates

Tuesday, November 28, 2023

Discount Rates [Effective Date: 7/27/23]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
	5.50	5.50	5.50	4.00

Federal Funds [Effective Date: 7/27/23]

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
Effective rate	5.34	5.34	5.35	3.83
Target rate	5.25-5.50	5.25-5.50	5.25-5.50	3.75-4.00
High	5.6500	5.6500	5.6500	4.0500
Low	5.3100	5.3100	5.3300	3.8000
Bid	5.3300	5.3300	5.3300	3.8200
Offer	5.3500	5.3500	5.3700	3.8400

Treasury Bill Auction

	LATEST	WK AGO	52-WEEK	
			HIGH	LOW
4 weeks	5.300	5.290	5.840	3.190
13 weeks	5.280	5.270	5.345	4.270
26 weeks	5.240	5.230	5.350	4.550

Weekly Survey

Wednesday, November 22, 2023

Freddie Mac

	LATEST	WK AGO	52-WEEK	
			YEAR AGO	
30-year fixed	7.29	7.44	6.58	
15-year fixed	6.67	6.76	5.90	

U.S. prime rate is the base rate on corporate loans posted by at least 70% of the 10 largest U.S. banks, and is effective 7/27/23. **Other prime rates** aren't directly comparable; lending practices vary widely by location; **Discount rate** is the charge on loans to depository institutions by the New York Federal Reserve Banks, and is effective 7/27/23; **Federal-funds rate** are Tullett Prebon rates as of 5:30 p.m. on reserves traded among commercial banks for overnight use; **Call money rate** is the charge on loans to brokers on stock-exchange collateral; **Commercial Paper (AA financial)** is from the Federal Reserve and is presented with a one-day lag. **Secured Overnight Financing Rate** is the average rate at which institutions can borrow US dollars overnight while posting US Treasury bonds as collateral. **DTCC GCF Repo Index** is Depository Trust & Clearing Corp.'s weighted average for overnight trades in applicable CUSIPs. Value traded is in billions of U.S. dollars.

Sources: Federal Reserve, Bureau of Labor Statistics, [DTCC](#), [FactSet](#), Tullett Prebon

RCAF Lump Sum Amortization
2024/Q1

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hour	U.S. ST Hours
NS - BLET 2022Q4 PPI	2023Q1	2023Q2				224,778,198
NS - BLET 2023 Ave PPI	2023Q1	2023Q2				224,778,198
NS - BLET 2023 TPB	2023Q1	2023Q2				224,778,198
NS - BLET 2023Q2 PPI	2023Q2	2023Q3				224,778,198
NS - BLET 2023Q1 PPI	2023Q3	2023Q4				224,778,198
National Neg. Lump Sum	2023Q4	2023Q4				224,778,198
NS - BLET 2024Q1 PPI	2023Q4	2024Q1				224,778,198
Total			\$ 135,147,185.87	0.60125		

Should be slightly less
than amortized amount.

Fell out

NS - BLET 2022Q2 PPI	2022Q3	2022Q4				224,778,198
----------------------	-------------------	-------------------	--	--	--	------------------------

Interest Rate

2021/Q2	0.030
2021/Q3	0.015
2021/Q4	0.055
2022/Q1	0.050
2022/Q2	0.380
2022/Q3	1.060
2022/Q4	2.740
2023/Q1	4.285
2023/Q2	4.750
2023/Q3	5.250
2023/Q4	5.340
2024/Q1	5.280

Lump Sum Adjustment for 2024/Q1 → 0.610804
or
0.611

**RCAF Back Pay Amortization
2024/Q1**

	Quarter of Payment	Quarter Amortization Began	Amount	Annual Per ST Hour	1 Quarter Per ST Hr.	U.S. ST Hours
DH and Soo Indep	2023Q1	2023Q2				224,778,199
Total			\$1,867,327	0.00830742		

Should be slightly less
than amortized amount.

2022

Fell out

DME - BLET 2022Q4	2022Q3	2022Q4		224,778,199	2022
National Contract (All)	2022Q4	2023Q1		224,778,199	2022

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

New National Contracts 2023Q1 = (All Unions) except CP Railroads

Interest Rate	
2022/Q2	0.380
2022/Q3	1.060
2022/Q4	2.740
2023/Q1	4.285
2023/Q2	4.750
2023/Q3	5.250
2023/Q4	5.340
2024/Q1	5.28

Back Pay Adjustment for 2024/Q1	→ 0.00858 or 0.009
---------------------------------	--------------------------

Health and Welfare 2024Q1

	Employees Receiving		Total 2023	Total 2024
	Pay 2022	Monthly Contribution 2023 2024		
1. All Employees				
a. Group health	122,362	\$1,972.43 \$1,972.43	\$241,350,479.66	\$241,350,479.66
b. Group dental	122,362	69.10 69.15	8,455,214.20	8,461,332.30
c. Early retirement major medical	122,362	65.94 48.95	8,068,550.28	5,989,619.90
d. Group vision	122,362	8.51 8.56	1,041,300.62	1,047,418.72
2. Supplemental Sickness				
a. Signalmen	5,700	62.17 30.00	354,369.00	171,000.00
b. Shopcrafts	15,459	98.52 50.00	1,523,020.68	772,950.00
c. MOW	19,695	48.22 30.00	949,692.90	590,850.00
d. Yardmasters	1,333	76.77 61.75	102,334.41	82,312.75
3. Short-Term Disability				
a. Engineers (CSX, KCS, SOO, UP)	9,062	40.00 40.00	362,480.00	362,480.00
4. Monthly Total Premiums			262,207,441.75	258,828,443.33
5. Monthly Employee Contributions To H&W				
a. National ATDA (BNSF, CSX, KCS, NS, SOO, GTW, WC)	1,439	(\$309.21) (\$309.21)	(\$444,953.19)	(444,953.19)
b. National BLET (BNSF, CSX, KCS, NS, UP, SOO, DH)	19,976	(\$309.21) (\$309.21)	(\$6,176,778.96)	(6,176,778.96)
c. National BMW (All except SOO, DME, DH)	18,935	(\$309.21) (\$309.21)	(\$5,854,891.35)	(5,854,891.35)
d. National BRS (All except DME)	5,575	(\$309.21) (\$309.21)	(\$1,723,845.75)	(1,723,845.75)
e. National IAM (BNSF, CSX, KCS, NS, SOO, UP)	4,553	(\$309.21) (\$309.21)	(\$1,407,833.13)	(1,407,833.13)
f. National IBBM (BNSF, CSX, KCS, NS, SOO, UP, IC)	585	(\$309.21) (\$309.21)	(\$180,887.85)	(180,887.85)
g. National IBEW (All except DME)	3,796	(\$309.21) (\$309.21)	(\$1,173,761.16)	(1,173,761.16)
h. National NCFO (All except DME and DH)	1,484	(\$309.21) (\$309.21)	(\$458,867.64)	(458,867.64)
i. National SMW (BNSF, CSX, KCS, NS, UP, IC)	529	(\$309.21) (\$309.21)	(\$163,572.09)	(163,572.09)
j. National TCU (All except DME and DH)	3,660	(\$309.21) (\$309.21)	(\$1,131,708.60)	(1,131,708.60)
k. National TCU-CAR (All except DME)	5,777	(\$309.21) (\$309.21)	(\$1,786,306.17)	(1,786,306.17)
l. National UTU (BNSF, CSX, KCS, NS, UP, SOO, DH)	29,529	(\$309.21) (\$309.21)	(\$9,130,662.09)	(9,130,662.09)
m. Yardmasters (BNSF, CSX, KCS, NS, UP*, SOO, DH)	1,262	(\$309.21) (\$309.21)	(\$390,223.02)	(\$390,223.02)
n. Misc Indep (DME, CMQ, portions of DH & SOO, portions of CN)	4,451	(\$289.43) (\$289.43)	(\$1,288,239.61)	(1,288,239.61)
Total Major Union	101,551		(\$31,312,530.61)	(\$31,312,530.61)
All Other Employee Contributions*			(\$3,207,823.72)	(\$3,207,823.72)
6. Net Employer Monthly Payments			\$227,687,087.42	\$224,308,089.00
7. Ratio Projected Year to Base Year, Based on Net Monthly Payments				0.98516
8. H&W hourly rate for base year 2021			\$9.401	
9. H&W hourly rate for projected quarter				\$9.261

* Non-union employee contributions net of opt-outs. The \$31,312,530.61 in major union contributions, plus \$3,207,823.72 in all other employee contributions, totals to the 12-month average of the total employee contributions reported to the AAR in its WF survey.

NATIONAL RAILWAY LABOR CONFERENCE

EMPLOYEE BENEFITS DEPARTMENT

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

David B. Marcus
Managing Director of Benefits
(571) 336-7596
dmarcus@rrnrlc.org

Eureka Norment
National Health Plan Manager
(571) 336-7629
enorment@rrnrlc.org

Paul Winters
Director of Benefits
(571) 336-7623
pwinters@rrnrlc.org

Ryan Rabac
Health Comm. Manager
(571) 336-7625
rrabac@rrnrlc.org

November 2, 2023

Ms. Kiara Williams
Director, Financial Reporting
Association of American Railroads
425 Third Street, SW, Suite 1000
Washington, D.C. 20024

Dear Ms. Williams:

The revised employer monthly Payment Rates which are effective January 1, 2024 are as follows:

Railroad Employees National Health & Welfare Plan & SMART-TD H&W Plan	
Non-Hospital Road	\$1,972.43
Railroad Employees National Early Retirement Major Medical Benefit Plan	
Non-Hospital Road	\$ 48.95
Aetna - National Dental Plan	\$ 69.15
The Hartford - Supplemental Sickness Plans	
Shop Craft	\$ 50.00
Signalmen	\$ 30.00
Maintenance of Way	\$ 30.00
Trustmark - Supplemental Sickness Plans	
Yardmasters	\$ 61.75
EyeMed - National Vision Plan	\$ 8.56

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

Very truly yours,

Eureka Norment

Eureka Norment

cc: Data@aar.org

Railroad Retirement and Medicare for RCAF

Inputs:

RRB Earnings Distribution Year	2021	Tier I Maximum Taxable Earnings for 2024	168,600
Wage Statistics Year	2022	Tier II Maximum Taxable Earnings for 2024	125,100
Current Year	2024	Medicare Maximum Taxable Earnings for 2024	no limit
Employees Receiving Pay*	122,378	Tier I Employer Tax Rate for 2024	6.20%
* from 2022 final wage statistics		Tier II Employer Tax Rate for 2024	13.10%
		Medicare Employer Tax Rate for 2024	1.45%

USA RCAF	Wage Rate	Update Factor	Railroad Retirement Tax	Hourly Rate
2021	\$43.459			
2022	\$47.010	1.08172	\$622,793,723	\$10.490
1Q/2024	\$52.581	1.20991	\$684,364,774	\$11.527
2Q/2024		0.00000	--	\$0.000
3Q/2024		0.00000	--	\$0.000
4Q/2024		0.00000	--	\$0.000

Railroad Retirement & Medicare, U.S.

From 2021 Earnings Distribution			1Q/2024 Updated Using Earnings Distribution & Wage Statistics, plus Current Wage Rates with Current Tax Info								
Earnings Groups	Avg Ann. Earnings	% of Total Employees	Employees Recvg. Pay	Annual Earnings	Avg Qtlly Earnings	Tier I Taxable	Tier II Taxable	Medicare Taxable	Total Taxable Earnings (Taxable x Employees)		
									Tier I	Tier II	Medicare
\$0 - 41,699	\$22,243	0.622 %	761	\$26,912	\$6,728	\$6,728	\$6,728	\$6,728	\$5,121,283	\$5,121,283	\$5,121,283
41,700 - 43,699	\$42,478	0.124	152	51,394	12,849	12,849	12,849	12,849	1,949,758	1,949,758	1,949,758
43,700 - 45,699	\$44,415	0.373	456	53,738	13,434	13,434	13,434	13,434	6,132,443	6,132,443	6,132,443
45,700 - 47,699	\$46,908	0.249	305	56,754	14,189	14,189	14,189	14,189	4,323,558	4,323,558	4,323,558
47,700 - 49,699	\$48,823	0.560	685	59,071	14,768	14,768	14,768	14,768	10,120,629	10,120,629	10,120,629
49,700 - 51,699	\$50,237	0.311	381	60,782	15,196	15,196	15,196	15,196	5,783,345	5,783,345	5,783,345
51,700 - 53,699	\$52,410	0.747	914	63,411	15,853	15,853	15,853	15,853	14,492,049	14,492,049	14,492,049
53,700 - 55,699	\$54,607	1.182	1,447	66,069	16,517	16,517	16,517	16,517	23,892,458	23,892,458	23,892,458
55,700 - 57,699	\$56,673	0.809	990	68,569	17,142	17,142	17,142	17,142	16,971,482	16,971,482	16,971,482
57,700 - 59,699	\$58,725	0.809	990	71,052	17,763	17,763	17,763	17,763	17,585,980	17,585,980	17,585,980
59,700 - 61,699	\$60,533	1.742	2,132	73,239	18,310	18,310	18,310	18,310	39,033,310	39,033,310	39,033,310
61,700 - 63,699	\$62,652	2.116	2,590	75,803	18,951	18,951	18,951	18,951	49,073,342	49,073,342	49,073,342
63,700 - 65,699	\$64,843	2.800	3,427	78,454	19,613	19,613	19,613	19,613	67,207,256	67,207,256	67,207,256
65,700 - 67,699	\$66,856	2.987	3,655	80,889	20,222	20,222	20,222	20,222	73,921,478	73,921,478	73,921,478
67,700 - 69,699	\$68,686	3.485	4,265	83,104	20,776	20,776	20,776	20,776	88,606,593	88,606,593	88,606,593
69,700 - 71,699	\$70,691	2.987	3,655	85,529	21,382	21,382	21,382	21,382	78,161,769	78,161,769	78,161,769
71,700 - 73,699	\$72,600	3.111	3,807	87,839	21,960	21,960	21,960	21,960	83,604,887	83,604,887	83,604,887
73,700 - 75,699	\$74,607	4.543	5,560	90,267	22,567	22,567	22,567	22,567	125,463,485	125,463,485	125,463,485
75,700 - 77,699	\$76,750	2.551	3,122	92,860	23,215	23,215	23,215	23,215	72,474,274	72,474,274	72,474,274
77,700 - 79,699	\$78,516	3.111	3,807	94,997	23,749	23,749	23,749	23,749	90,417,649	90,417,649	90,417,649
79,700 - 81,699	\$80,643	3.298	4,036	97,570	24,393	24,393	24,393	24,393	98,449,238	98,449,238	98,449,238
81,700 - 83,699	\$82,766	3.671	4,492	100,139	25,035	25,035	25,035	25,035	112,468,624	112,468,624	112,468,624
83,700 - 85,699	\$84,684	3.485	4,265	102,460	25,615	25,615	25,615	25,615	109,244,398	109,244,398	109,244,398
85,700 - 87,699	\$86,692	3.298	4,036	104,889	26,222	26,222	26,222	26,222	105,833,877	105,833,877	105,833,877
87,700 - 89,699	\$88,531	2.987	3,655	107,114	26,779	26,779	26,779	26,779	97,887,136	97,887,136	97,887,136
89,700 - 91,699	\$90,700	2.925	3,580	109,738	27,435	27,435	27,435	27,435	98,203,776	98,203,776	98,203,776
91,700 - 93,699	\$92,531	2.551	3,122	111,954	27,988	27,988	27,988	27,988	87,376,118	87,376,118	87,376,118
93,700 - 95,699	\$94,733	1.867	2,285	114,618	28,655	28,655	28,655	28,655	65,469,744	65,469,744	65,469,744
95,700 - 97,699	\$96,844	2.676	3,275	117,172	29,293	29,293	29,293	29,293	95,929,871	95,929,871	95,929,871
97,700 - 99,699	\$98,712	2.302	2,817	119,432	29,858	29,858	29,858	29,858	84,114,390	84,114,390	84,114,390
99,700 - 101,699	\$100,684	2.489	3,046	121,818	30,455	30,455	30,455	30,455	92,764,197	92,764,197	92,764,197
101,700 - 103,699	\$102,743	2.614	3,199	124,309	31,077	31,077	31,077	31,077	99,415,215	99,415,215	99,415,215
103,700 - 105,699	\$104,673	2.116	2,590	126,645	31,661	31,661	31,275	31,661	81,987,070	80,987,190	81,987,070
105,700 - 107,699	\$106,752	2.489	3,046	129,160	32,290	32,290	31,275	32,290	98,354,888	95,263,288	98,354,888
107,700 - 109,699	\$108,699	2.240	2,741	131,516	32,879	32,879	31,275	32,879	90,129,840	85,733,132	90,129,840
109,700 - 111,699	\$110,473	1.742	2,132	133,662	33,415	33,415	31,275	33,415	71,235,968	66,672,819	71,235,968
111,700 - 113,699	\$112,554	1.556	1,904	136,180	34,045	34,045	31,275	34,045	64,828,438	59,553,908	64,828,438
113,700 - 115,699	\$114,625	1.991	2,437	138,685	34,671	34,671	31,275	34,671	84,478,392	76,202,976	84,478,392
\$115,700 - over	\$148,494	18.482	22,618	179,664	44,916	42,150	31,275	44,916	953,344,568	707,374,884	1,015,904,546
TOTAL	\$95,320	99.998	122,376						3,465,852,777	3,193,281,810	3,528,412,755
									6.20%	13.10%	1.45%
									\$214,882,872	\$418,319,917	\$51,161,985

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

\$684,364,774

Railroad Retirement & Medicare, U.S.

From 2021 Earnings Distribution			2Q/2024 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	\$22,243	0.622 %	761	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41,700 - 43,699	\$42,478	0.124	152	0	0	0	0	0	0	0	0
43,700 - 45,699	\$44,415	0.373	456	0	0	0	0	0	0	0	0
45,700 - 47,699	\$46,908	0.249	305	0	0	0	0	0	0	0	0
47,700 - 49,699	\$48,823	0.560	685	0	0	0	0	0	0	0	0
49,700 - 51,699	\$50,237	0.311	381	0	0	0	0	0	0	0	0
51,700 - 53,699	\$52,410	0.747	914	0	0	0	0	0	0	0	0
53,700 - 55,699	\$54,607	1.182	1,447	0	0	0	0	0	0	0	0
55,700 - 57,699	\$56,673	0.809	990	0	0	0	0	0	0	0	0
57,700 - 59,699	\$58,725	0.809	990	0	0	0	0	0	0	0	0
59,700 - 61,699	\$60,533	1.742	2,132	0	0	0	0	0	0	0	0
61,700 - 63,699	\$62,652	2.116	2,590	0	0	0	0	0	0	0	0
63,700 - 65,699	\$64,843	2.800	3,427	0	0	0	0	0	0	0	0
65,700 - 67,699	\$66,856	2.987	3,655	0	0	0	0	0	0	0	0
67,700 - 69,699	\$68,686	3.485	4,265	0	0	0	0	0	0	0	0
69,700 - 71,699	\$70,691	2.987	3,655	0	0	0	0	0	0	0	0
71,700 - 73,699	\$72,600	3.111	3,807	0	0	0	0	0	0	0	0
73,700 - 75,699	\$74,607	4.543	5,560	0	0	0	0	0	0	0	0
75,700 - 77,699	\$76,750	2.551	3,122	0	0	0	0	0	0	0	0
77,700 - 79,699	\$78,516	3.111	3,807	0	0	0	0	0	0	0	0
79,700 - 81,699	\$80,643	3.298	4,036	0	0	0	0	0	0	0	0
81,700 - 83,699	\$82,766	3.671	4,492	0	0	0	0	0	0	0	0
83,700 - 85,699	\$84,684	3.485	4,265	0	0	0	0	0	0	0	0
85,700 - 87,699	\$86,692	3.298	4,036	0	0	0	0	0	0	0	0
87,700 - 89,699	\$88,531	2.987	3,655	0	0	0	0	0	0	0	0
89,700 - 91,699	\$90,700	2.925	3,580	0	0	0	0	0	0	0	0
91,700 - 93,699	\$92,531	2.551	3,122	0	0	0	0	0	0	0	0
93,700 - 95,699	\$94,733	1.867	2,285	0	0	0	0	0	0	0	0
95,700 - 97,699	\$96,844	2.676	3,275	0	0	0	0	0	0	0	0
97,700 - 99,699	\$98,712	2.302	2,817	0	0	0	0	0	0	0	0
99,700 - 101,699	\$100,684	2.489	3,046	0	0	0	0	0	0	0	0
101,700 - 103,699	\$102,743	2.614	3,199	0	0	0	0	0	0	0	0
103,700 - 105,699	\$104,673	2.116	2,590	0	0	0	386	0	0	999,880	0
105,700 - 107,699	\$106,752	2.489	3,046	0	0	0	1,015	0	0	3,091,600	0
107,700 - 109,699	\$108,699	2.240	2,741	0	0	0	1,604	0	0	4,396,708	0
109,700 - 111,699	\$110,473	1.742	2,132	0	0	0	2,140	0	0	4,563,149	0
111,700 - 113,699	\$112,554	1.556	1,904	0	0	0	2,770	0	0	5,274,531	0
113,700 - 115,699	\$114,625	1.991	2,437	0	0	0	3,396	0	0	8,275,417	0
\$115,700 - over	\$148,494	18.482	22,618	0	0	2,766	13,641	0	62,559,978	308,529,662	0
TOTAL		99.998	122,376						62,559,978	335,130,946	0
									6.20%	13.10%	1.45%
									\$3,878,719	\$43,902,154	\$0

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

\$47,780,873

Railroad Retirement & Medicare, U.S.

From 2021 Earnings Distribution			3Q/2024 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	\$22,243	0.622 %	761	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41,700 - 43,699	\$42,478	0.124	152	0	0	0	0	0	0	0	0
43,700 - 45,699	\$44,415	0.373	456	0	0	0	0	0	0	0	0
45,700 - 47,699	\$46,908	0.249	305	0	0	0	0	0	0	0	0
47,700 - 49,699	\$48,823	0.560	685	0	0	0	0	0	0	0	0
49,700 - 51,699	\$50,237	0.311	381	0	0	0	0	0	0	0	0
51,700 - 53,699	\$52,410	0.747	914	0	0	0	0	0	0	0	0
53,700 - 55,699	\$54,607	1.182	1,447	0	0	0	0	0	0	0	0
55,700 - 57,699	\$56,673	0.809	990	0	0	0	0	0	0	0	0
57,700 - 59,699	\$58,725	0.809	990	0	0	0	0	0	0	0	0
59,700 - 61,699	\$60,533	1.742	2,132	0	0	0	0	0	0	0	0
61,700 - 63,699	\$62,652	2.116	2,590	0	0	0	0	0	0	0	0
63,700 - 65,699	\$64,843	2.800	3,427	0	0	0	0	0	0	0	0
65,700 - 67,699	\$66,856	2.987	3,655	0	0	0	0	0	0	0	0
67,700 - 69,699	\$68,686	3.485	4,265	0	0	0	0	0	0	0	0
69,700 - 71,699	\$70,691	2.987	3,655	0	0	0	0	0	0	0	0
71,700 - 73,699	\$72,600	3.111	3,807	0	0	0	0	0	0	0	0
73,700 - 75,699	\$74,607	4.543	5,560	0	0	0	0	0	0	0	0
75,700 - 77,699	\$76,750	2.551	3,122	0	0	0	0	0	0	0	0
77,700 - 79,699	\$78,516	3.111	3,807	0	0	0	0	0	0	0	0
79,700 - 81,699	\$80,643	3.298	4,036	0	0	0	0	0	0	0	0
81,700 - 83,699	\$82,766	3.671	4,492	0	0	0	0	0	0	0	0
83,700 - 85,699	\$84,684	3.485	4,265	0	0	0	0	0	0	0	0
85,700 - 87,699	\$86,692	3.298	4,036	0	0	0	0	0	0	0	0
87,700 - 89,699	\$88,531	2.987	3,655	0	0	0	0	0	0	0	0
89,700 - 91,699	\$90,700	2.925	3,580	0	0	0	0	0	0	0	0
91,700 - 93,699	\$92,531	2.551	3,122	0	0	0	0	0	0	0	0
93,700 - 95,699	\$94,733	1.867	2,285	0	0	0	0	0	0	0	0
95,700 - 97,699	\$96,844	2.676	3,275	0	0	0	0	0	0	0	0
97,700 - 99,699	\$98,712	2.302	2,817	0	0	0	0	0	0	0	0
99,700 - 101,699	\$100,684	2.489	3,046	0	0	0	0	0	0	0	0
101,700 - 103,699	\$102,743	2.614	3,199	0	0	0	0	0	0	0	0
103,700 - 105,699	\$104,673	2.116	2,590	0	0	0	0	0	0	0	0
105,700 - 107,699	\$106,752	2.489	3,046	0	0	0	0	0	0	0	0
107,700 - 109,699	\$108,699	2.240	2,741	0	0	0	0	0	0	0	0
109,700 - 111,699	\$110,473	1.742	2,132	0	0	0	0	0	0	0	0
111,700 - 113,699	\$112,554	1.556	1,904	0	0	0	0	0	0	0	0
113,700 - 115,699	\$114,625	1.991	2,437	0	0	0	0	0	0	0	0
\$115,700 - over	\$148,494	18.482	22,618	0	0	0	0	0	0	0	0
TOTAL		99.998	122,376						0	0	0
Total Taxable Earnings									0	0	0
Employer Tax Rate									6.20%	13.10%	1.45%
Quarterly Payment									\$0	\$0	\$0
Total Tier I, Tier II, and Medicare Paid this Quarter											\$0

Railroad Retirement & Medicare, U.S.

From 2021 Earnings Distribution			4Q/2024 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	\$22,243	0.622 %	761	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
41,700 - 43,699	\$42,478	0.124	152	0	0	0	0	0	0	0	0
43,700 - 45,699	\$44,415	0.373	456	0	0	0	0	0	0	0	0
45,700 - 47,699	\$46,908	0.249	305	0	0	0	0	0	0	0	0
47,700 - 49,699	\$48,823	0.560	685	0	0	0	0	0	0	0	0
49,700 - 51,699	\$50,237	0.311	381	0	0	0	0	0	0	0	0
51,700 - 53,699	\$52,410	0.747	914	0	0	0	0	0	0	0	0
53,700 - 55,699	\$54,607	1.182	1,447	0	0	0	0	0	0	0	0
55,700 - 57,699	\$56,673	0.809	990	0	0	0	0	0	0	0	0
57,700 - 59,699	\$58,725	0.809	990	0	0	0	0	0	0	0	0
59,700 - 61,699	\$60,533	1.742	2,132	0	0	0	0	0	0	0	0
61,700 - 63,699	\$62,652	2.116	2,590	0	0	0	0	0	0	0	0
63,700 - 65,699	\$64,843	2.800	3,427	0	0	0	0	0	0	0	0
65,700 - 67,699	\$66,856	2.987	3,655	0	0	0	0	0	0	0	0
67,700 - 69,699	\$68,686	3.485	4,265	0	0	0	0	0	0	0	0
69,700 - 71,699	\$70,691	2.987	3,655	0	0	0	0	0	0	0	0
71,700 - 73,699	\$72,600	3.111	3,807	0	0	0	0	0	0	0	0
73,700 - 75,699	\$74,607	4.543	5,560	0	0	0	0	0	0	0	0
75,700 - 77,699	\$76,750	2.551	3,122	0	0	0	0	0	0	0	0
77,700 - 79,699	\$78,516	3.111	3,807	0	0	0	0	0	0	0	0
79,700 - 81,699	\$80,643	3.298	4,036	0	0	0	0	0	0	0	0
81,700 - 83,699	\$82,766	3.671	4,492	0	0	0	0	0	0	0	0
83,700 - 85,699	\$84,684	3.485	4,265	0	0	0	0	0	0	0	0
85,700 - 87,699	\$86,692	3.298	4,036	0	0	0	0	0	0	0	0
87,700 - 89,699	\$88,531	2.987	3,655	0	0	0	0	0	0	0	0
89,700 - 91,699	\$90,700	2.925	3,580	0	0	0	0	0	0	0	0
91,700 - 93,699	\$92,531	2.551	3,122	0	0	0	0	0	0	0	0
93,700 - 95,699	\$94,733	1.867	2,285	0	0	0	0	0	0	0	0
95,700 - 97,699	\$96,844	2.676	3,275	0	0	0	0	0	0	0	0
97,700 - 99,699	\$98,712	2.302	2,817	0	0	0	0	0	0	0	0
99,700 - 101,699	\$100,684	2.489	3,046	0	0	0	0	0	0	0	0
101,700 - 103,699	\$102,743	2.614	3,199	0	0	0	0	0	0	0	0
103,700 - 105,699	\$104,673	2.116	2,590	0	0	0	0	0	0	0	0
105,700 - 107,699	\$106,752	2.489	3,046	0	0	0	0	0	0	0	0
107,700 - 109,699	\$108,699	2.240	2,741	0	0	0	0	0	0	0	0
109,700 - 111,699	\$110,473	1.742	2,132	0	0	0	0	0	0	0	0
111,700 - 113,699	\$112,554	1.556	1,904	0	0	0	0	0	0	0	0
113,700 - 115,699	\$114,625	1.991	2,437	0	0	0	0	0	0	0	0
\$115,700 - over	\$148,494	18.482	22,618	0	0	0	0	0	0	0	0
TOTAL		99.998	122,376						0	0	0
Total Taxable Earnings									0	0	0
Employer Tax Rate									6.20%	13.10%	1.45%
Quarterly Payment									\$0	\$0	\$0
Total Tier I, Tier II, and Medicare Paid this Quarter											\$0

**Tax Rates and Maximum Taxable Earnings Under Social Security,
Railroad Retirement and Railroad Unemployment Insurance Programs, Continued**

Period	Railroad Retirement					Railroad Unemployment Insurance				Unemployment Repayment	
	Maximum earnings		Tax rate (percent) [5]							Tax [6]	
	base [5]		Tier I	Tier II		Maximum monthly taxable earnings	Employer tax rate [7] (percent)	Surcharge or (pooled credit)	New employer tax rate (percent)	Maximum taxable earnings	Employer tax rate (percent)
	Tier I [9]	Tier II	Employer & employee each	Employer	Employee						
1991	53,400	39,600	7.65	16.1	4.9	765	5.55 - 12.0	...	8.00	765	4.0
1992	55,500	41,400	7.65	16.1	4.9	785	3.10 - 12.0	(3.12)	8.00	785	4.0
1993	57,600	42,900	7.65	16.1	4.9	810	0.65 - 12.0	(5.31)	7.30	810	4.0
1994	60,600	45,000	7.65	16.1	4.9	840	0.65 - 12.0	(0.22)	6.06		
1995	61,200	45,300	7.65	16.1	4.9	850	0.65 - 12.0	...	4.15		
1996	62,700	46,500	7.65	16.1	4.9	865	0.65 - 12.0	...	2.31		
1997	65,400	48,600	7.65	16.1	4.9	890	0.65 - 12.0	...	1.16		
1998	68,400	50,700	7.65	16.1	4.9	925	2.15 - 12.0	1.5	0.85		
1999	72,600	53,700	7.65	16.1	4.9	970	2.15 - 12.0	1.5	0.92		
2000	76,200	56,700	7.65	16.1	4.9	1,005	0.65 - 12.0	...	1.67		
2001	80,400	59,700	7.65	16.1	4.9	1,050	2.15 - 12.0	1.5	2.59		
2002	84,900	63,000	7.65	15.6	4.9	1,100	3.15 - 12.0	2.5	2.71		
2003	87,000	64,500	7.65	14.2	4.9	1,120	3.15 - 12.0	2.5	2.36		
2004	87,900	65,100	7.65	13.1	4.9	1,130	2.15 - 12.0	1.5	2.38		
2005	90,000	66,900	7.65	12.6	4.4	1,150	2.15 - 12.0	1.5	3.43		
2006	94,200	69,900	7.65	12.6	4.4	1,195	2.15 - 12.0	1.5	4.03		
2007	97,500	72,600	7.65	12.1	3.9	1,230	2.15 - 12.0	1.5	3.75		
2008	102,000	75,900	7.65	12.1	3.9	1,280	2.15 - 12.0	1.5	3.02		
2009	106,800	79,200	7.65	12.1	3.9	1,330	2.15 - 12.0	1.5	2.61		
2010	106,800	79,200	7.65	12.1	3.9	1,330	2.15 - 12.0	1.5	2.51		
2011	106,800	79,200	[2] 7.65	12.1	3.9	1,330	3.15 - 12.0	2.5	2.50		
2012	110,100	81,900	[2] 7.65	12.1	3.9	1,365	2.15 - 12.0	1.5	2.65		
2013	113,700	84,300	[3] 7.65	12.6	4.4	1,405	0.65 - 12.0	...	3.69		
2014	117,000	87,000	[3] 7.65	12.6	4.4	1,440	0.65 - 12.0	...	4.53		
2015	118,500	88,200	[3] 7.65	13.1	4.9	1,455	2.15 - 12.0	1.5	4.09		
2016	118,500	88,200	[3] 7.65	13.1	4.9	1,455	2.15 - 12.0	1.5	2.52		
2017	127,200	94,500	[3] 7.65	13.1	4.9	1,545	2.15 - 12.0	1.5	1.62		
2018	128,400	95,400	[3] 7.65	13.1	4.9	1,560	2.15 - 12.0	1.5	1.97		
2019	132,900	98,700	[3] 7.65	13.1	4.9	1,605	2.15 - 12.0	1.5	2.75		
2020	137,700	102,300	[3] 7.65	13.1	4.9	1,655	0.65 - 12.0	...	3.10		
2021	142,800	106,200	[3] 7.65	13.1	4.9	1,710	3.15 - 12.0	2.5	3.15		
2022	147,000	109,200	[3] 7.65	13.1	4.9	1,755	4.15 - 12.5	3.5	2.62		
2023	160,200	118,800	[3] 7.65	13.1	4.9	1,895	2.15 - 12.0	1.5	2.82		
2024	168,600	125,100	[3] 7.65	13.1	4.9	1,985	0.65 - 12.0	...	4.58		
2025 and later	[4]	[4]	[3] 7.65	[10]	[10]	[4]	[7]	[7]	[7]		

See footnotes at end of table.

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
			\$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	5.69%	\$20,520	\$43.326		1.039317	\$18,861.96	\$0.569
			\$43.000	(2019)			
2020 Avg.	0.99%	\$19,860	\$43.981		1.022814	\$18,813.21	\$0.100
3Q/21 reb.	5.69%	\$20,520	\$43.508		1.011814	\$19,413.47	\$0.593
4Q/21	5.69%	\$20,520	\$43.504		1.011721	\$19,413.42	\$0.593
1Q/22	11.23%	\$21,060	\$43.482		1.011209	\$19,907.93	\$1.200
2Q/22	11.23%	\$21,060	\$43.606		1.014093	\$19,909.70	\$1.200
3Q/22	11.23%	\$21,060	\$43.732		1.017023	\$19,911.50	\$1.201
		\$1,755	\$43.981	(2020)			
2021 Avg.	5.69%	\$20,520	\$43.459		0.988125	\$19,350.22	\$0.574
3Q/22 reb.	11.23%	\$21,060	\$43.725		0.994174	\$19,846.09	\$1.162
4Q/22	11.23%	\$21,060	\$43.758		0.994933	\$19,846.60	\$1.162
1Q/23	7.79%	\$22,740	\$56.875		1.293172	\$21,601.54	\$0.877
2Q/23	7.79%	\$22,740	\$56.781		1.291035	\$21,549.68	\$0.875
3Q/23	7.79%	\$22,740	\$58.742		1.335622	\$21,570.87	\$0.876
		\$1,895	\$43.459	(2021)			
2022 Avg.	11.23%	\$20,520	\$47.010		1.081709	\$19,772.63	\$0.574
3Q/23 reb.	7.79%	\$22,740	\$59.106		1.343899	\$21,466.50	\$0.432
4Q/23	7.79%	\$22,740	\$59.559		1.354198	\$21,472.86	\$0.432
1Q/24	0.66%	\$23,820	\$52.581		1.195539	\$22,343.75	\$0.038
2Q/24					0.000000		\$0.000
3Q/24					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.



ASSOCIATION OF
AMERICAN RAILROADS

MEMORANDUM

TO: File
FROM: Kiara Carter
DATE: November 27, 2023
RE: Unemployment Insurance Tax Rate for 2024

Unemployment Insurance rates for 2024 can range from a minimum of 0.65 percent to a maximum of 12 percent (the prior maximum was 12 percent) on monthly earnings up to \$1,985. There will be no surcharge in effect for 2024, meaning the minimum tax rate is effectively 0.65 percent. Sheryl Enders at the Railroad Retirement Board said in her November e-mail that the weighted average 2024 Unemployment Insurance rate for Class I railroads is **0.66 percent** which includes Delaware and Hudson Railway (D&H) and Dakota, Minnesota & Eastern Railroad Corporation (DME).

The SAS System
TOTAL GROSS EARNINGS AND AVERAGE GROSS EARNINGS-2021 RRB File

The MEANS Procedure

Variable	N	Sum	Mean
ANUAL_US	2108	44868353.51	21284.80
QTRLY_US	2108	47100616.11	22343.75

The SAS System
Factors and Caps 2024 and 2024Q1

The MEANS Procedure

Variable	N	Sum	Mean
FactorA	2108	2280.24	1.0817090
FactorQ	2108	2520.20	1.1955390
Capa	2108	47935920.00	22740.00
Capq	2108	50212560.00	23820.00

EIA has resumed its regular data publication schedule, but intermittent disruptions to data availability via dashboards, tools, and data browsers on our website will continue as we complete our planned system upgrades.

PETROLEUM & OTHER LIQUIDS

[OVERVIEW](#)
[DATA](#)
[ANALYSIS & PROJECTIONS](#)
[GLOSSARY ›](#)
[FAQS ›](#)

Spot Prices

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

Period: 

Product by Area	 	11/20/23	11/21/23	11/22/23	11/23/23	11/24/23	11/27/23	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	78.10	78.35	76.80		74.83	74.46	1986-2023
Brent - Europe	☐	83.25	82.42	81.76	80.85	79.82	79.49	1987-2023
Conventional Gasoline								
New York Harbor, Regular	☐	2.384	2.405	2.395		2.341	2.328	1986-2023
U.S. Gulf Coast, Regular	☐	2.062	2.122	2.112		2.074	2.131	1986-2023
RBOB Regular Gasoline								
Los Angeles	☐	2.419	2.435	2.425		2.361	2.391	2003-2023
No. 2 Heating Oil								
New York Harbor	☐	2.845	2.890	2.841		2.823	2.833	1986-2023
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	2.912	2.947	2.899		2.883	2.883	2006-2023
U.S. Gulf Coast	☐	2.617	2.725	2.676		2.553	2.601	2006-2023
Los Angeles	☐	3.127	3.205	3.156		3.103	3.116	1996-2023
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	2.695	2.702	2.654		2.601	2.618	1990-2023
Propane								
Mont Belvieu, Texas	☐	0.660	0.648	0.643		0.628	0.636	1992-2023

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.

EIA has resumed its regular data publication schedule, but intermittent disruptions to data availability via dashboards, tools, and data browsers on our website will continue as we complete our planned system upgrades.

PETROLEUM & OTHER LIQUIDS

[OVERVIEW](#)
[DATA](#)
[ANALYSIS & PROJECTIONS](#)
[GLOSSARY ›](#)
[FAQS ›](#)

Spot Prices

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

Period: 

Product by Area	 	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	71.58	70.25	76.07	81.39	89.43	85.64	1986-2023
Brent - Europe	☐	75.47	74.84	80.11	86.15	93.72	90.60	1987-2023
Conventional Gasoline								
New York Harbor, Regular	☐	2.570	2.659	2.700	2.874	2.894	2.524	1986-2023
U.S. Gulf Coast, Regular	☐	2.447	2.427	2.674	2.902	2.824	2.305	1986-2023
RBOB Regular Gasoline								
Los Angeles	☐	2.672	2.802	2.970	3.276	3.780	2.635	2003-2023
No. 2 Heating Oil								
New York Harbor	☐	2.181	2.278	2.498	2.939	3.168	3.002	1986-2023
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	2.346	2.432	2.671	3.117	3.325	3.114	2006-2023
U.S. Gulf Coast	☐	2.302	2.351	2.597	3.050	3.265	3.009	2006-2023
Los Angeles	☐	2.386	2.415	2.817	3.437	3.850	3.286	1996-2023
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	2.173	2.250	2.488	2.989	3.120	2.881	1990-2023
Propane								
Mont Belvieu, Texas	☐	0.666	0.574	0.629	0.679	0.730	0.675	1992-2023

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.

EIA has resumed its regular data publication schedule, but intermittent disruptions to data availability via dashboards, tools, and data browsers on our website will continue as we complete our planned system upgrades.

PETROLEUM & OTHER LIQUIDS

[OVERVIEW](#)
[DATA](#)
[ANALYSIS & PROJECTIONS](#)
[GLOSSARY ›](#)
[FAQS ›](#)

Spot Prices

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

Period: 

Product by Area	 	10/20/23	10/27/23	11/03/23	11/10/23	11/17/23	11/24/23	View History
Crude Oil								
WTI - Cushing, Oklahoma	☐	88.03	85.20	81.99	77.92	76.98	77.02	1986-2023
Brent - Europe	☐	92.47	89.84	88.21	83.52	81.93	81.62	1987-2023
Conventional Gasoline								
New York Harbor, Regular	☐	2.580	2.467	2.296	2.303	2.307	2.381	1986-2023
U.S. Gulf Coast, Regular	☐	2.354	2.240	2.128	2.088	2.053	2.093	1986-2023
RBOB Regular Gasoline								
Los Angeles	☐	2.637	2.519	2.484	2.591	2.629	2.410	2003-2023
No. 2 Heating Oil								
New York Harbor	☐	3.123	2.913	2.867	2.746	2.795	2.850	1986-2023
Ultra-Low-Sulfur No. 2 Diesel Fuel								
New York Harbor	☐	3.219	3.063	3.010	2.858	2.878	2.910	2006-2023
U.S. Gulf Coast	☐	3.078	2.989	2.893	2.666	2.600	2.643	2006-2023
Los Angeles	☐	3.287	3.117	3.047	3.030	3.083	3.148	1996-2023
Kerosene-Type Jet Fuel								
U.S. Gulf Coast	☐	2.952	2.856	2.908	2.751	2.759	2.663	1990-2023
Propane								
Mont Belvieu, Texas	☐	0.659	0.654	0.653	0.629	0.629	0.645	1992-2023

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.

U.S.

Summary by Composition Category

	MS-2022		Prev. Idx	2023Q4		Calculation		Relative of Change
	MS Amount	Weight		Cur Idx		Prev. Idx	Cur Idx	
Forest Products	800,288,707	0.1412	440.98	455.97		62.27	64.38	
Metal Products	3,377,322,405	0.5961	222.33	219.04		132.53	130.57	
Misc. Products	1,488,461,740	0.2627	495.57	477.18		130.19	125.36	
Total	5,666,072,852	1.0000	324.99	320.31				0.9856
Total Linked			322.78	318.13				
'77 = 100 Link Fact.= 1.423			459.32	452.70				
'80 = 100 Link Fact.= 1.061			342.47	337.54				

As info only	Change
Forest Products	3.40%
Metal Products	-1.48%
Misc. Products	-3.71%
Total ('80=100)	-1.44%
Rounded 80 Indices	-1.5%
Rounded 77 Indices	-1.4%

Car Hire for RCAF - 2022 Weights

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

		1980	June 3Q/23	Sept. 4Q/23	Dec. 1Q/24	Mar. 2Q/24	June 3Q/24
RATE							
RR-OWNED TIME		31.00	65.00	65.00	66.00	--	--
RR-OWNED MILEAGE		4.69	6.50	6.50	6.50	--	--
PRIVATELY-OWNED CARS		25.47	58.62	60.19	60.29	--	--
AUTORACKS		47.00	90.83	94.51	98.49	--	--
INDEX							
RR-OWNED TIME		100.0	209.7	209.7	212.9	--	--
RR-OWNED MILEAGE		100.0	138.6	138.6	138.6	--	--
PRIVATELY-OWNED CARS		100.0	230.1	236.3	236.7	--	--
AUTORACKS		100.0	193.3	201.1	209.6	--	--
CAR HIRE INDEX (old wts)	2021	100.0	223.8	--	--	--	--
CAR HIRE INDEX (new wts)	2022	100.0	223.2	228.6	229.5	--	--
CAR HIRE INDEX (LINKED)		100.0	220.8	226.1	227.0	--	--

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

Car Hire Data From CHARM		2023 (first day of month)						2024 (first day of month)								
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Railroad Equipment																
No. of Cars (cars with rates only)																
Superstructures (Vehicular Flats)			10,806	10,781	10,754	10,752	10,558	11,030								
Rate (in cents)																
Superstructures #3 - Auto Rack			94.0	94.0	92.0	93.0	102.0	101.0								
All other #1 - Time			65.0	65.0	65.0	65.0	65.0	66.0								
All other #2 - Mileage			6.5	6.5	6.5	6.5	6.5	6.5								
Private Equipment																
No. of Cars (cars with rates only)																
Superstructures (Vehicular Flats)		1	54,982	55,341	55,671	55,831	55,901	55,934								
Covered Hoppers		2	436,434	436,409	436,760	436,661	437,326	437,706								
Tank Cars		3	424,449	423,688	423,896	424,288	424,695	424,602								
Others		4	300,679	300,801	300,882	301,421	301,024	300,428								
Rate (in cents)																
Superstructures #1 - Time			85.0	85.0	85.0	85.0	85.0	86.0								
Superstructures #2 - Mileage			1.6	1.6	1.6	1.6	1.6	1.6								
Superstructures #3 - Auto Rack			92.0	93.0	95.0	96.0	97.0	98.0								
Covered Hoppers #2 - Mileage		2	45.3	45.3	45.4	45.5	45.5	45.6								
Tank Cars #2 - Mileage		3	96.1	96.1	100.5	100.5	100.5	100.5								
Others #1 -Time			105.0	105.0	105.0	105.0	105.0	105.0								
Others #2 - Mileage			8.7	8.7	8.7	8.7	8.7	8.7								
AVERAGE RATES																
Private Superstructures		1	21.58	21.58	21.58	21.58	21.58	21.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Private Others		4	32.01	32.01	32.01	32.01	32.01	32.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Private Total			58.67	58.63	60.19	60.22	60.23	60.29	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
Autoracks			92.33	93.16	94.51	95.52	97.79	98.49	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

Car Hire Weights	"Old Wts"	"New Wts"
	2021	2022
For RCAF & RCR		
RR-owned Time	0.065	0.091
RR-owned Mileage	0.038	0.041
Privately-owned Cars	0.857	0.832
Autoracks	0.040	0.036
----- Check sum	1.000	1.000

Weights for Equipment Rents		
(not used in Car Hire calculation)		
	2021	2022
Car Hire - U.S.	0.681	0.681
Lease Rentals - U.S.	0.319	0.319
----- Check sum	1.000	1.000

Notes:
The Car Hire Index and Lease Rentals Index are weighed together to calculate the Equipment Rents Index
CHARM is the Car Hire Accounting Rate Master
The 4 bold lines are used for the Car Hire Rate. Private Total uses a weighted average of the Covered Hoppers, Tank Cars, Combined Private Superstructures, and Combined Private Others rates.
[The purpose of this page is to provide more insight on the calculation of the **private total rate**.] Beginning with 2012 data, only active cars are used.

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 12/23

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	11,030	108	0.059	101
Railroad	Number of Zero-Rated Vehicular Flats	281			
Railroad	All Other Cars	362,034	66	0.065	
Railroad	Number of Zero-Rated Other Cars	9,373			
Railroad	Total Railroad Equipment	382,718			
Private	Vehicular Flats	55,934	86	0.016	98
Private	Number of Zero-Rated Vehicular Flats	245			
Private	Covered Hoppers	437,706	0	0.456	
Private	Number of Zero-Rated Covered Hoppers	15,579			
Private	Tanks	424,602	0	1.005	
Private	Number of Zero-Rated Tanks	14,636			
Private	All Other Cars	300,428	105	0.087	
Private	Number of Zero-Rated Other Cars	23,357			
Private	Total Private Equipment	1,272,493			

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.

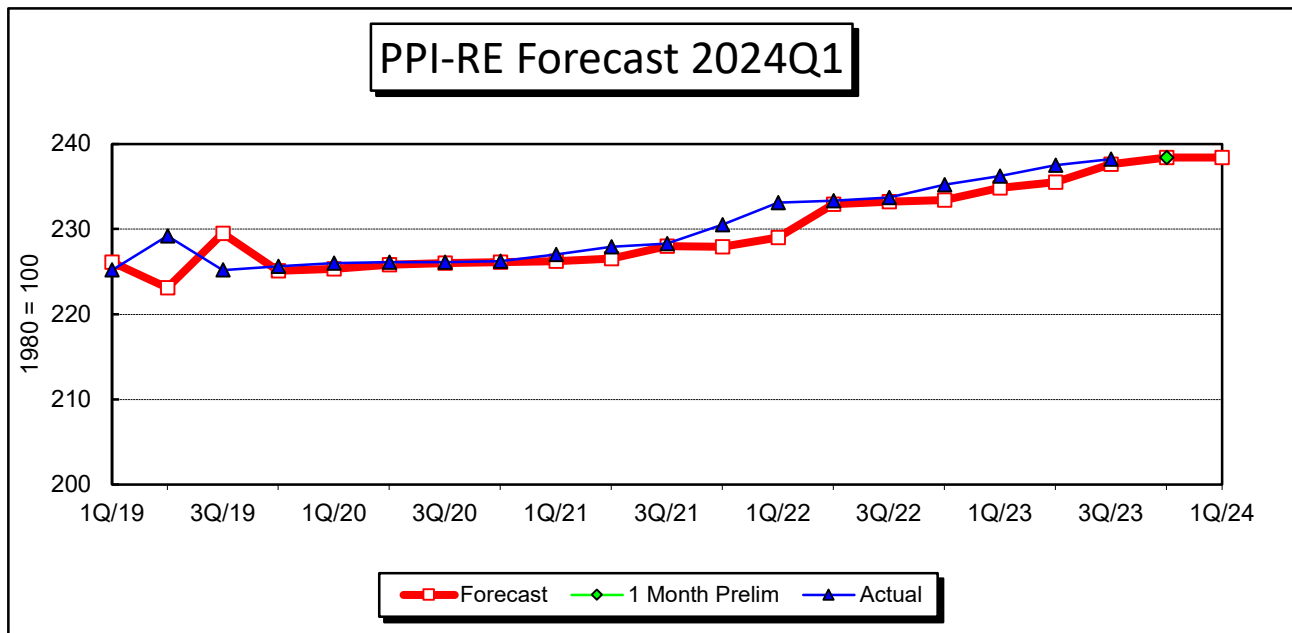
Equipment must be Active in Umler to be included in this report; Pre-registered and Inactive cars are excluded.

PPI-RE Forecast (for Depreciation Component)

	Forecast	Actual	1 Month Prelim
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	
2Q/20	225.8	226.1	
3Q/20	226.0	226.1	
4Q/20	226.1	226.2	
1Q/21	226.2	227	
2Q/21	226.5	227.9	
3Q/21	228.0	228.3	
4Q/21	227.9	230.5	
1Q/22	229.0	233.1	
2Q/22	232.9	233.3	
3Q/22	233.2	233.7	
4Q/22	233.4	235.2	
1Q/23	234.8	236.2	
2Q/23	235.5	237.5	
3Q/23	237.6	238.2	
4Q/23	238.4		238.4
1Q/24	238.4		

1980 Base

	PPI-RE Forecast		Percent Change			
	(82=100)	(80=100)	Yr Ago Actual	Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2023Q4						
Low	212.3	234.8	-0.6%			
Midpoint	215.5	238.4	0.9%	0.0%	0.1%	0.0%
High	218.7	241.9	2.4%			



12/4/2023

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 1.37 and for Box-Jenkins was 1.35.

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, 1, 0)

Within-Sample Statistics

Sample size	72	No. parameters	0
Mean	206.78	Std. deviation	4.48
R-square	0.97	Adj. R-square	0.97
Durbin-Watson	2.14	Ljung-Box(18)	16.2 P=0.42
Forecast error	0.81	BIC	0.81
MAPE	18.00%	SMAPE	18.00%
RMSE	0.81	MAD	0.38
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2023-May	214.7
2023-Jun	214.7
2023-Jul	215.4
2023-Aug	215
2023-Sep	215.4
2023-Oct	215.5

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2023-Nov	213.910	215.500	217.09
2023-Dec	213.252	215.500	217.748
2024-Jan	212.746	215.500	218.254
2024-Feb	212.320	215.500	218.68
2024-Mar	211.945	215.500	219.055
QTR AVG	212.337	215.500	218.663

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 1.37 and for Box-Jenkins was 1.35.
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, 1, 0)

Within-Sample Statistics

Sample size	72	No. parameters	0
Mean	206.78	Std. deviation	4.48
R-square	0.97	Adj. R-square	0.97
Durbin-Watson	2.14	Ljung-Box(18)	16.2 P=0.42
Forecast error	0.81	BIC	0.81
MAPE	0.18	SMAPE	0.18
RMSE	0.81	MAD	0.38
MAD/Mean Ratio	0		

Historic Data

Date	Historic
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

Depreciation

2019-May	203.4
2019-Jun	203.4
2019-Jul	203.5
2019-Aug	203.5
2019-Sep	203.7
2019-Oct	203.7
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
2021-Feb	204.9
2021-Mar	205.8
2021-Apr	206
2021-May	206
2021-Jun	206.1
2021-Jul	206.4
2021-Aug	206.4
2021-Sep	206.5
2021-Oct	207.2
2021-Nov	208.7
2021-Dec	209.4
2022-Jan	210.6
2022-Feb	210.7
2022-Mar	210.7
2022-Apr	210.8
2022-May	210.9
2022-Jun	211
2022-Jul	211.1
2022-Aug	211.7
2022-Sep	212.3
2022-Oct	212.4
2022-Nov	212.7
2022-Dec	212.7
2023-Jan	212.9
2023-Feb	213
2023-Mar	214.7
2023-Apr	214.7
2023-May	214.7
2023-Jun	214.7
2023-Jul	215.4
2023-Aug	215

Depreciation

2023-Sep	215.4
2023-Oct	215.5

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2023-Nov	213.91	215.5	217.09
2023-Dec	213.252	215.5	217.748
2024-Jan	212.746	215.5	218.254
2024-Feb	212.32	215.5	218.68
2024-Mar	211.945	215.5	219.055
2024-Apr	211.606	215.5	219.394
2024-May	211.294	215.5	219.706
2024-Jun	211.003	215.5	219.997
2024-Jul	210.73	215.5	220.27
2024-Aug	210.472	215.5	220.528
2024-Sep	210.227	215.5	220.773
2024-Oct	209.992	215.5	221.008

Databases, Tables & Calculators by Subject

Change Output Options:

From: 2022

To: 2023

GO

☐ include graphs ☐ include annual averages

[More Formatting Options](#)

Data extracted on: December 3, 2023 (1:29:54 PM)

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](#)

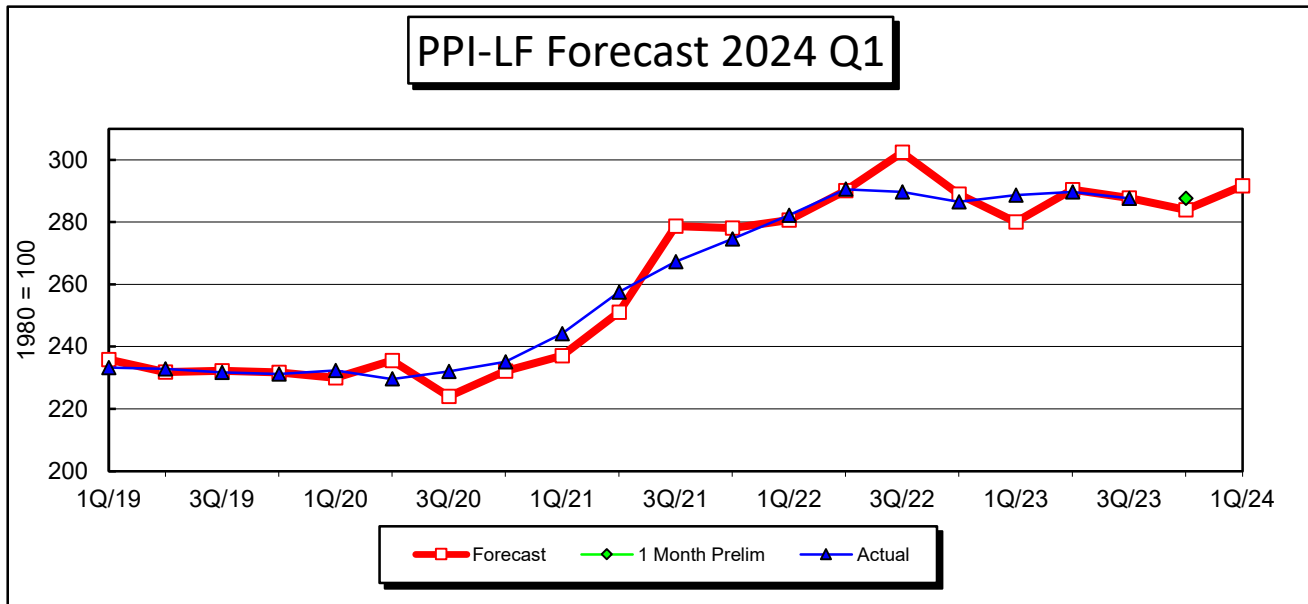
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	210.629	210.710	210.731	210.761	210.942	210.986	211.080	211.724	212.338	212.425	212.664	212.744
2023	212.860	213.003	214.710	214.684	214.684	214.703	215.418(P)	215.418(P)	215.418(P)	215.467(P)		
P : Preliminary. All indexes are subject to monthly revisions up to four months after original publication.												

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

	Forecast	Actual	1 Month Prelim
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	244.1	
2Q/21	251.0	257.5	
3Q/21	278.7	267.3	
4Q/21	278.1	274.6	
1Q/22	280.6	282.2	
2Q/22	290.1	290.6	
3Q/22	302.4	289.7	
4Q/22	289.0	286.5	
1Q/23	280.0	288.7	
2Q/23	290.4	289.7	
3Q/23	287.7	287.6	
4Q/23	283.9		287.6
1Q/24	291.6		

1980 Base

	PPI-LF Forecast		Yr Ago Actual	Percent Change		
	(82=100)	(80=100)		Latest Month Actual	2nd Prev Qtr Actual	Previous Forecast
2023Q1						
Low	250.9	281.3	-2.6%			
Midpoint	260.1	291.6	1.0%	1.4%	1.4%	2.7%
High	269.3	301.9	4.6%			



**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 4.57 and for Box-Jenkins was 4.50.

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]	0.4265	0.1152	3.701	0.9997

Within-Sample Statistics

Sample size	72	No. parameters	1
Mean	226.36	Std. deviation	22.87
R-square	1	Adj. R-square	1
Durbin-Watson	2.14	Ljung-Box(18)	21.3 P=0.73
Forecast error	0.84	BIC	0.86
MAPE	0.27	SMAPE	0.27
RMSE	0.83	MAD	0.62
MAD/Mean Ratio	0		

Actual Values for the Most Recent 6 Periods:

Actual

2023-May	258.6
2023-Jun	257.7
2023-Jul	256.7
2023-Aug	256.4
2023-Sep	256.3
2023-Oct	256.5

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2023-Nov	255.471	257.127	258.782
2023-Dec	253.924	257.625	261.326
2024-Jan	252.911	259.105	265.298
2024-Feb	251.091	260.158	269.224
2024-Mar	248.722	260.997	273.273
QTR AVG	250.908	260.087	269.265

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 4.57 and for Box-Jenkins was 4.50.
The rolling out-of-sample test used a maximum horizon of 12 and generated 78 forecasts for each met

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]	0.4265	0.1152	3.701	0.9997

Within-Sample Statistics

Sample size	72	No. parameters	1
Mean	226.36	Std. deviation	22.87
R-square	1	Adj. R-square	1
Durbin-Watson	2.14	Ljung-Box(18)	21.3 P=0.73
Forecast error	0.84	BIC	0.86
MAPE	0.27	SMAPE	0.27
RMSE	0.83	MAD	0.62
MAD/Mean Ratio	0		

Historic Data

Date	Historic
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

Other

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
2020-Jun	205
2020-Jul	205.8
2020-Aug	207
2020-Sep	208.1
2020-Oct	208.7
2020-Nov	209.2
2020-Dec	211.5
2021-Jan	214.9
2021-Feb	217.5
2021-Mar	221.5
2021-Apr	225.9
2021-May	230.5
2021-Jun	234
2021-Jul	236.5
2021-Aug	238.5
2021-Sep	240
2021-Oct	242.8
2021-Nov	245.5
2021-Dec	246.5
2022-Jan	249.774
2022-Feb	251.33
2022-Mar	254.556
2022-Apr	257.425
2022-May	260.128
2022-Jun	260.449
2022-Jul	259.5
2022-Aug	258.7
2022-Sep	257.1
2022-Oct	255.9
2022-Nov	255.7
2022-Dec	255.2
2023-Jan	257
2023-Feb	257.8
2023-Mar	258.1
2023-Apr	258.6
2023-May	258.6
2023-Jun	257.7

Other

2023-Jul	256.7
2023-Aug	256.4
2023-Sep	256.3
2023-Oct	256.5

Forecast Data

Date	2.5 Lower	Forecast	97.5 Upper
2023-Nov	255.471	257.127	258.782
2023-Dec	253.924	257.625	261.326
2024-Jan	252.911	259.105	265.298
2024-Feb	251.091	260.158	269.224
2024-Mar	248.722	260.997	273.273
2024-Apr	246.132	261.922	277.713
2024-May	243.049	262.634	282.22
2024-Jun	239.32	262.962	286.604
2024-Jul	235.303	263.248	291.192
2024-Aug	231.353	263.831	296.31
2024-Sep	227.266	264.501	301.735
2024-Oct	223.096	265.298	307.499

Databases, Tables & Calculators by Subject

Change Output Options:

From: 2022

To: 2023

GO

☐ include graphs ☐ include annual averages

[More Formatting Options](#)

Data extracted on: December 3, 2023 (2:10:28 PM)

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
2022	249.774	251.330	254.556	257.425	260.128	260.449	259.519	258.706	257.140	255.891	255.703	255.204
2023	257.029	257.806	258.065	258.597	258.603	257.683	256.676(P)	256.388(P)	256.270(P)	256.463(P)		
P : Preliminary. All indexes are subject to monthly revisions up to four months after original publication.												

Forecast Error Calculation

	2021 Weight	Third Quarter 2023		Difference		Notes
		2023Q3 Forecast	2023Q3 Actual	Pt.	Pct.	
Labor	31.4%	584.1	584.1	0.0	0%	* actual=forecast
Fuel	14.2%	330.3	323.5	-6.8	-2%	from 1st month of quarter
M&S	4.5%	336.2	336.2	0.0	0%	* actual=forecast
Equip Rents	4.9%	261.0	257.9	-3.1	-1%	
Depreciation	17.5%	237.6	238.2	0.6	0%	PPI-RE
Interest	2.4%	50.1	50.1	0.0	0%	* actual=forecast
Other	25.1%	287.7	287.6	-0.1	0%	PPI-LF
Weighted Avg	100.0%					
1980 = 100		373.2	372.2			calculated
1980 = 100 (linked)		342.9	340.7			calculated
4Q22 = 100	3.423	100.2	99.5			calculated
4Q17 = 100	2.645	129.6	128.8			calculated
4Q12 = 100	2.976	115.2	114.5			calculated
4Q07 = 100	2.459	139.4	138.6			calculated
4Q02 = 100	1.921	178.5	177.4			calculated
4Q97 = 100	1.732	198.0	196.7			calculated
Forecast Error		-0.7				calculated -0.007 = RCAF adj.
Prior Quarter						
1980 = 100		375.4	370.2 **			
1980 = 100 (linked)		344.9	338.9			
4Q17 = 100		130.4	128.1			calculated
4Q12 = 100		115.9	113.9			calculated
4Q07 = 100		140.3	137.8			calculated
4Q02 = 100		179.5	176.4			calculated
4Q97 = 100		199.1	195.7			calculated
Equipment Rents						
Car Hire	68.1%	220.8	221.2			from Equipment Rents/CHARM
Lease Rentals	31.9%	287.7	287.6			(equals PPI-LF from above)
Weighted Average		242.1	242.4			calculated
Linked		261.0	257.9			calculated
Prior Quarter						
Weighted Average		242.5	242.8 **			
Linked		261.4	258.3			
Sum of Weights	ok					** if fourth quarter (2nd quarter filing), only weighted avg for prior needs
Sum of ER Wt.	ok					weights, linked is ok (found in 3Q index calc)

Factors to change from
1982=100 to 1980 = 100

0.9040

0.8920

RCAF Fuel (Actual All-Inclusive Index)

October 2023

Monthly Report

	October 2023 Price (cents) (1)	1/1/81 Price (cents) (2)	1/91 New Method Linking Factors (3)	October 2023 Index 1/1/81=100 (4)	Linking Factor 1980=100 (5)	October 2023 1980=100 Current Index (6)
U.S.	329.16	89.34	99.415	366.28	1.096	401.44

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

(6) = (4) x (5)

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

	October 2023 1980=100 Current Index	Adjustment Factor	October 2023 1980=100 Linked Index
U.S.	401.44	1.00192	402.21 ←

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

RCAF - Depreciation

Current Qtr Forecast **238.4**

Series ID : wpu144

Not Seasonally Adjusted

Group : Transportation equipment

Item : Railroad equipment

		Forecast Year 2024			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	24Q1	24Q2	24Q3	24Q4
For Actual	→	23Q3	23Q4	24Q1	24Q2
January	2023	212.9			
February	2023	213.0			
March	2023	214.7			
April	2023	214.7			
May	2023	214.7			
June	2023	214.7			
July	2023	215.4			
August	2023	215.0			
September	2023	215.4			
October	2023	215.5			
November	2023				
December	2023				
January	2024				
February	2024				
March	2024				
April	2024				
May	2024				
June	2024				
July	2024				
Actual Qtr.		215.3	NA	NA	NA

1980=100

Actual Qtr.	238.2	NA	NA	NA
First Mo. next qtr.	238.4	NA	NA	NA

0.904 =1980

RCAF - Other

Series ID : wpu03t15m05

Not Seasonally Adjusted

Group : Industrial Commodities less fuels

Item : Industrial commodities less fuels

		Forecast Year 2024			
		As reported at end of month 82=100			
		Nov.	Feb.	May	Aug.
For Forecast	→	24Q1	24Q2	24Q3	24Q4
For Actual	→	23Q3	23Q4	24Q1	24Q2
January	2023	257.0			
February	2023	257.8			
March	2023	258.1			
April	2023	258.6			
May	2023	258.6			
June	2023	257.7			
July	2023	256.7			
August	2023	256.4			
September	2023	256.3			
October	2023	256.5			
November	2023				
December	2023				
January	2024				
February	2024				
March	2024				
April	2024				
May	2024				
June	2024				
July	2024				
Actual Qtr.		256.5	NA	NA	NA

1980=100

Actual Qtr.	287.6	NA	NA	NA
First Mo. next qtr.	287.6	NA	NA	NA

0.892 =1980

Car Hire for RCAF - 2021 Weights

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

		1980	Aug 3Q/22	Nov 4Q/22	Feb 1Q/23	May 2Q/23	Aug 3Q/23
RATE							
RR-OWNED TIME		31.00	66.00	65.00	65.00	65.00	65.00
RR-OWNED MILEAGE		4.69	6.60	6.50	6.50	6.50	6.50
PRIVATELY-OWNED CARS		25.47	54.49	55.31	55.08	58.61	58.63
AUTORACKS		47.00	85.28	85.74	85.71	90.00	93.16
INDEX							
RR-OWNED TIME		100.0	212.9	209.7	209.7	209.7	209.7
RR-OWNED MILEAGE		100.0	140.7	138.6	138.6	138.6	138.6
PRIVATELY-OWNED CARS		100.0	214.0	217.2	216.2	230.1	230.2
AUTORACKS		100.0	181.4	182.4	182.4	191.5	198.2
CAR HIRE INDEX (old wts)	2020	100.0	209.9	--	--	--	--
CAR HIRE INDEX (new wts)	2021	100.0	209.8	212.3	211.5	223.8	224.1
CAR HIRE INDEX (LINKED)		100.0	207.1	209.6	208.8	220.9	221.2

Note: Indexes are rounded, rates are full float.

Car Hire Data From CHARM

Car Hire Data From CHARM		2022 (first day of month)						2023 (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)		11,290	11,241	11,227	11,170	11,145	11,076	11,053	11,032	11,017	10,995	10,860	10,842	10,806	10,781	
Rate (in cents)																
Superstructures #3 - Auto Rack		96.0	96.0	96.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	95.0	95.0	94.0	94.0	
All other #1 - Time		66.0	66.0	66.0	66.0	65.0	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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	
Private Equipment																
No. of Cars (cars with rates only)																
Superstructures (Vehicular Flats)		1	52,889	52,862	52,821	52,861	52,954	53,099	53,316	53,476	53,748	54,124	54,340	54,648	54,982	55,341
Covered Hoppers		2	432,908	433,070	433,230	433,142	433,214	433,335	433,615	433,263	433,595	434,059	435,450	435,875	436,434	436,409
Tank Cars		3	424,667	424,855	424,771	424,425	424,653	424,680	424,753	424,542	424,644	424,619	424,315	424,282	424,449	423,688
Others		4	291,898	292,890	294,113	294,736	295,326	296,149	297,062	297,489	298,245	298,969	299,530	300,149	300,679	300,801
Rate (in cents)																
Superstructures #1 - Time			86.0	86.0	86.0	86.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0	85.0
Superstructures #2 - Mileage			1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.6	1.6	1.6	1.6	1.6	1.6
Superstructures #3 - Auto Rack			82.0	83.0	83.0	84.0	84.0	85.0	83.0	84.0	85.0	87.0	89.0	90.0	92.0	93.0
Covered Hoppers #2 - Mileage		2	45.1	45.1	45.2	45.2	45.2	45.3	45.0	45.0	45.1	45.1	45.2	45.2	45.3	45.3
Tank Cars #2 - Mileage		3	83.8	83.8	86.2	86.2	86.2	86.2	85.9	85.9	95.6	95.9	95.9	96.0	96.1	96.1
Others #1 -Time			105.0	105.0	104.0	104.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0
Others #2 - Mileage			8.4	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.6	8.7	8.7	8.7	8.7
AVERAGE RATES																
Private Superstructures		1	21.61	21.61	21.61	21.61	21.38	21.38	21.38	21.48	21.58	21.58	21.58	21.58	21.58	21.58
Private Others		4	31.71	31.81	31.59	31.59	31.81	31.81	31.81	31.81	31.81	31.91	32.01	32.01	32.01	32.01
Private Total			54.48	54.49	55.30	55.28	55.31	55.33	55.09	55.08	58.50	58.60	58.61	58.62	58.67	58.63
Autoracks			84.46	85.28	85.28	85.74	85.74	86.55	84.89	85.71	86.53	88.18	90.00	90.83	92.33	93.16

Car Hire Weights	"Old Wts"	"New Wts"
	2020	2021
For RCAF & RCR		
RR-owned Time	0.052	0.065
RR-owned Mileage	0.039	0.038
Privately-owned Cars	0.874	0.857
Autoracks	0.035	0.040
----- Check sum	1.000	1.000

Weights for Equipment Rents		
(not used in Car Hire calculation)		
	2020	2021
Car Hire - U.S.	0.614	0.647
Lease Rentals - U.S.	0.386	0.353
----- Check sum	1.000	1.000

Notes:

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

CHARM is the Car Hire Accounting Rate Master

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

[The purpose of this page is to provide more insight on the calculation of the **private total rate**.]

Beginning with 2012 data, only active cars are used.

CHARM Process - Car Hire Rate Report

Average Car Rental Rates for 08/23

Ownership	Car Group	Car Count	Time Rate (cents/hour)	Mileage Rate (\$/mile)	Auto Rack Rate (cents/hour)
Railroad	Vehicular Flats	10,781	110	0.060	94
Railroad	Number of Zero-Rated Vehicular Flats	193			
Railroad	All Other Cars	361,891	65	0.065	
Railroad	Number of Zero-Rated Other Cars	11,440			
Railroad	Total Railroad Equipment	384,305			
Private	Vehicular Flats	55,341	85	0.016	93
Private	Number of Zero-Rated Vehicular Flats	196			
Private	Covered Hoppers	436,409	0	0.453	
Private	Number of Zero-Rated Covered Hoppers	14,886			
Private	Tanks	423,688	0	0.961	
Private	Number of Zero-Rated Tanks	14,823			
Private	All Other Cars	300,801	105	0.087	
Private	Number of Zero-Rated Other Cars	22,291			
Private	Total Private Equipment	1,268,440			

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.