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**ASSOCIATION
OF AMERICAN
RAILROADS**

Craig F. Rockey
Vice President - Policy & Economics

December 5, 2002

The Honorable Vernon A. Williams
Secretary
Surface Transportation Board, Room 711
1925 K Street, N.W.
Washington, DC 20423-0001



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Dear Mr. Williams:

This submission is the AAR forecast of the first quarter 2003 All-Inclusive Index and Rail Cost Adjustment Factor, filed in Ex Parte No. 290 (Sub-No. 5) (2003-1), *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 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 2003 results *on the fourth quarter 2002 base*, and shows the percentage changes from the previous quarter.

	<u>2002Q4</u>	<u>2003Q1</u>	<u>% Change</u>
All-Inclusive Index	98.9	99.2	0.3
Preliminary RCAF	0.989	0.992	0.3
Forecast Error Adjustment	0.011	0.004	
RCAF (Unadjusted)	1.000	0.996	-0.4
Productivity Adjustment Factor	1.9268	1.9466	
RCAF (Adjusted)	0.519	0.512	-1.3
PAF-5	1.9921	2.0126	
RCAF-5	0.502	0.495	-1.4

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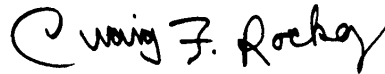
The Staggers Act requires that the RCAF be rebased every five years. The procedure necessary to calculate this rebasing was outlined by the ICC in Ex Parte No. 290 (Sub-No. 5) effective January 1, 1988. The rebasing calculation which will bring the index to the fourth quarter 2002 base is shown on page 2 of the attached filing.

Due to the fact that many railroads and shippers utilize changes in the RCAF as a basis for various agreements, the AAR has provided Attachment A, which contains historical RCAFs converted to a fourth quarter 2002 base. The AAR's recommended method for converting to another base is shown in the same attachment, as well as factors and indexes necessary to make those calculations.

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.

Two copies of the quarterly non-proprietary workpapers underlying this submission are 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. A third copy of the working papers has been delivered to Jeff Warren in the STB office handling this proceeding. All workpapers are available for STB inspection. Questions should be directed to me or Clyde Crimmel (202 639-2309) of this office.

Sincerely,

A handwritten signature in black ink that reads "Craig F. Rockey". The signature is written in a cursive, slightly slanted style.

Craig F. Rockey

Attachments

Rail Cost Adjustment Factor — 2002Q4 Base

Attachment A
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Yr/Qtr	Preliminary RCAF	Forecast Error Adjustment	RCAF (Unad- justed)	Productivity-Adjusted RCAF		STB's 2nd Productivity- Adjusted RCAF (Not endorsed by AAR)	
				Productivity Adjustment Factor	RCAF (Adjusted)	PAF-5	RCAF-5
(Col 1)	(Col 2)	(Col. 3)	(Col 4)	(Col 5)	(Col 6)	(Col 7)	(Col 8)
1992 Q1	0.804	-0.001	0.803	1.1227	0.715	1.1351	0.707
Q2	0.796	0.004	0.800	1.1348	0.705	1.1481	0.697
Q3	0.799	-0.002	0.797	1.1471	0.695	1.1613	0.686
Q4	0.813	0.004	0.817	1.1595	0.705	1.1747	0.695
1993 Q1	0.823	0.003	0.826	1.1720	0.705	1.1926	0.693
Q2	0.819	0.002	0.821	1.1847	0.693	1.2107	0.678
Q3	0.826	0.002	0.828	1.1975	0.691	1.2291	0.674
Q4	0.837	0.001	0.838	1.2104	0.692	1.2478	0.672
1994 Q1	0.844	-0.004	0.840	1.2253	0.686	1.2621	0.666
Q2	0.835	0.001	0.836	1.2404	0.674	1.2766	0.655
Q3	0.854	0.000	0.854	1.2557	0.680	1.2913	0.661
Q4	0.852	0.002	0.854	1.2711	0.672	1.3062	0.654
1995 Q1	0.862	0.003	0.865	1.2867	0.672	1.3222	0.654
Q2	0.870	0.004	0.874	1.3052	0.670	1.3385	0.653
Q3	0.879	0.003	0.882	1.3240	0.666	1.3550	0.651
Q4	0.879	0.002	0.881	1.3431	0.656	1.3716	0.642
1996 Q1	0.875	-0.004	0.871	1.3624	0.639	1.3914	0.626
Q2	0.871	-0.003	0.868	1.3820	0.628	1.4114	0.615
Q3	0.880	-0.003	0.877	1.4019	0.626	1.4317	0.613
Q4	0.887	0.006	0.893	1.4221	0.628	1.4524	0.615
1997 Q1	0.909	0.002	0.911	1.4426	0.631	1.4733	0.618
Q2	0.904	0.006	0.910	1.4603	0.623	1.4945	0.609
Q3	0.909	-0.001	0.908	1.4783	0.614	1.5160	0.599
Q4	0.902	0.000	0.902	1.4965	0.603	1.5378	0.587
1998 Q1	0.899	-0.001	0.898	1.5149	0.593	1.5567	0.577
Q2	0.893	0.005	0.898	1.5503	0.579	1.5758	0.570
Q3	0.903	-0.003	0.900	1.5866	0.567	1.5952	0.564
Q4	0.902	0.001	0.903	1.6237	0.556	1.6148	0.559
1999 Q1	0.901	-0.003	0.898	1.6617	0.540	1.6526	0.543
Q2	0.896	0.000	0.896	1.6850	0.532	1.6913	0.530
Q3	0.907	-0.004	0.903	1.7086	0.529	1.7309	0.522
Q4	0.906	0.006	0.912	1.7325	0.526	1.7714	0.515
2000 Q1	0.934	0.006	0.940	1.7568	0.535	1.7962	0.523
Q2	0.939	0.008	0.947	1.7719	0.534	1.8213	0.520
Q3	0.945	0.002	0.947	1.7871	0.530	1.8468	0.513
Q4	0.955	0.002	0.957	1.8025	0.531	1.8727	0.511
2001 Q1	0.973	0.005	0.978	1.8180	0.538	1.8888	0.518
Q2	0.966	0.003	0.969	1.8305	0.529	1.9050	0.509
Q3	0.973	-0.001	0.972	1.8431	0.527	1.9214	0.506
Q4	0.969	0.004	0.973	1.8558	0.524	1.9379	0.502
2002 Q1	0.970	-0.001	0.969	1.8686	0.519	1.9513	0.497
Q2	0.959	-0.002	0.957	1.8878	0.507	1.9648	0.487
Q3	0.966	-0.009	0.957	1.9072	0.502	1.9784	0.484
Q4	0.989	0.011	1.000	1.9268	0.519	1.9921	0.502
2003 Q1	0.992	0.004	0.996	1.9466	0.512	2.0126	0.495

Rail Cost Adjustment Factor — 2002Q4 Base

Attachment A
Page 2 of 4

Yr/Qtr (Col 1)	Preliminary RCAF (Col 2)	Forecast Error Adjustment (Col. 3)	RCAF (Unad- justed) (Col 4)	Productivity-Adjusted RCAF		STB's 2nd Productivity- Adjusted RCAF (Not endorsed by AAR)	
				Productivity Adjustment Factor (Col 5)	RCAF (Adjusted) (Col 6)	PAF-5 (Col 7)	RCAF-5 (Col 8)
1985 Q2	0.656	-	-	Beginning 1985Q2, the All-Inclusive Index was used to calculate the RCAF. The term "Preliminary RCAF" was not used, and the RCAF was calculated using a method like today's Preliminary RCAF calculation. There was no productivity adjustment. [In this table, the RCAF for 1985Q2-1986Q4 is in the Preliminary RCAF column.]			
Q3	0.654	-	-				
Q4	0.637	-	-				
1986 Q1	0.673	-	-				
Q2	0.644	-	-	Beginning 1987Q1, a forecast error adjustment was added. The terms "Preliminary RCAF", "Forecast Error Adjustment", and "RCAF" were used. [In this table, the RCAF for 1987Q1-1989Q1 is in the RCAF Unadjusted column.]			
Q3	0.654	-	-				
Q4	0.657	-	-				
1987 Q1	0.674	-0.005	0.669				
Q2	0.673	-0.001	0.672	Beginning 1989Q2, a productivity adjustment was added. What was formerly called the RCAF is now called the "RCAF (Unadjusted)" because it does not have a productivity adjustment. The productivity-adjusted RCAF is called the "RCAF (Adjusted)". In 1996, the Surface Transportation Board added another version of a productivity-adjusted RCAF called the "RCAF-5".			
Q3	0.679	0.005	0.684				
Q4	0.684	0.004	0.688				
1988 Q1	0.703	0.003	0.706				
Q2	0.713	0.005	0.718				
Q3	0.712	0.001	0.713				
Q4	0.711	0.005	0.716				
1989 Q1	0.721	-0.002	0.719	1.0042	0.720	1.0040	0.720
Q2	0.726	-0.003	0.723	1.0084	0.728	1.0080	0.728
Q3	0.730	0.004	0.734	1.0193	0.729	1.0120	0.734
Q4	0.737	0.006	0.743				
1990 Q1	0.752	-0.003	0.749	1.0303	0.727	1.0264	0.730
Q2	0.752	0.004	0.756	1.0414	0.726	1.0410	0.726
Q3	0.751	0.004	0.755	1.0526	0.717	1.0558	0.715
Q4	0.775	0.001	0.776	1.0640	0.729	1.0707	0.725
1991 Q1	0.787	0.001	0.788	1.0755	0.733	1.0834	0.727
Q2	0.776	0.011	0.787	1.0871	0.724	1.0962	0.718
Q3	0.796	-0.006	0.790	1.0988	0.719	1.1091	0.712
Q4	0.809	-0.001	0.808	1.1107	0.727	1.1222	0.720

Sample Rebasing Calculations

Attachment A
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Preliminary RCAF:

Recommended Method

The All-Inclusive Index (AII) Forecast is divided by the appropriate Linking Factor.

Example calculations (AII and Linking Factors are listed on page 4):

2001Q1 on 4Q02 basis = $186.9 / 192.1 = .9729307 = 0.973$

2001Q1 on 4Q97 basis = $186.9 / 173.2 = 1.079099 = 1.079$

2001Q1 on 4Q92 basis = $186.9 / 156.9 = 1.1912045 = 1.191$

Alternative Method

An alternative method can be used to convert a Preliminary RCAF from one basis to another basis without knowing the All-Inclusive Index. This method will occasionally have small rounding differences, and is not recommended except as a "check" or in cases where the All-Inclusive Index is not available. New base Index = (Old Linking Factor / New Linking Factor) x Old Base Index.

Example for converting 2001Q1 on 4Q97 basis to 4Q02 basis:

$(173.2 / 192.1) \times 1.079 = 0.9728411 = 0.973$

Forecast Error Adjustment:

Recommended Method

1. Use the All-Inclusive Indexes (AII) for the two quarters prior to the quarter to be adjusted.
2. The All Actual is divided by the appropriate Linking Factor and rounded 3 digits after decimal.
3. The All Forecast is divided by the appropriate Linking Factor and rounded.
4. Take the result from step 2 and subtract the result from step 3.

Example calculation for 2001Q1:

1. Use AII from 2 quarters prior, 2000Q3: $182.5 = \text{Actual}$, $181.6 = \text{Forecast}$

2. $\text{Actual} = 182.5 / 192.1 = .950026 = 0.950$

3. $\text{Forecast} = 181.6 / 192.1 = .9453409 = 0.945$

4. $\text{Forecast Error} = 0.950 - 0.945 = +0.005$

Alternative Method

This method has occasional rounding differences, and is not recommended except as a check or in cases where the All-Inclusive Indexes are not available. The new base Forecast Error Adjustment equals (Old Linking Factor / New Linking Factor) x Old Forecast Error Adjustment.

Example for converting 2001Q1 on 4Q97 basis to 4Q02 basis:

$\text{Forecast Error } 4Q02 \text{ basis} = (173.2 / 192.1) \times .006 = .0054096 = +0.005$

RCAF (Unadjusted)

$\text{RCAF (Unadjusted)} = \text{Preliminary RCAF} + \text{Forecast Error Adjustment}$

Example for 2001Q1, 4Q02 basis: $0.973 + 0.005 = 0.978$

Productivity Adjustment Factor

Use the Productivity Adjustment Factor as originally calculated for each quarter.

For 2001Q1, the Productivity Adjustment Factor is 1.8180.

RCAF (Adjusted)

$\text{RCAF (Adjusted)} = \text{RCAF (Unadjusted)} / \text{Productivity Adjustment Factor}$

Example for 2001Q1, 4Q02 basis: $0.978 / 1.8180 = 0.5379537 = 0.538$

PAF-5

Use the STB's alternative productivity adjustment factor, PAF-5, as originally calculated.

For 2001Q1, the PAF-5 is 1.8888

RCAF-5

$\text{RCAF-5} = \text{RCAF (Unadjusted)} / \text{PAF-5}$

Example for 2001Q1, 4Q02 basis: $0.978 / 1.8888 = 0.517789 = 0.518$

Indexes & Factors for RCAF Rebased

Attachment A
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Yr/Qtr	All Inclusive Index 1980 = 100		Prod. Adj. Factor	PAF-5	Yr/Qtr	All Inclusive Index 1980 = 100		Prod. Adj. Factor	PAF-5
	Forecast	Actual				Forecast	Actual		
1985 Q1	-	-	-	-	1995 Q1	165.5	166.2	1.2867	1.3222
Q2	126.0	126.6	-	-	Q2	167.1	167.6	1.3052	1.3385
Q3	125.7	125.1	-	-	Q3	168.8	168.0	1.3240	1.3550
Q4	122.3	123.3	-	-	Q4	168.9	168.2	1.3431	1.3716
1986 Q1	129.3	128.4	-	-	1996 Q1	168.0	167.6	1.3624	1.3914
Q2	123.7	124.2	-	-	Q2	167.4	168.4	1.3820	1.4114
Q3	125.7	124.7	-	-	Q3	169.0	169.4	1.4019	1.4317
Q4	126.2	126.1	-	-	Q4	170.4	171.6	1.4221	1.4524
1987 Q1	129.5	130.4	-	-	1997 Q1	174.7	174.4	1.4426	1.4733
Q2	129.2	130.1	-	-	Q2	173.7	173.7	1.4603	1.4945
Q3	130.4	131.1	-	-	Q3	174.6	174.4	1.4783	1.5160
Q4	131.4	132.3	-	-	Q4	173.2	174.2	1.4965	1.5378
1988 Q1	135.1	135.2	-	-	1998 Q1	172.7	172.1	1.5149	1.5567
Q2	137.0	137.9	-	-	Q2	171.5	171.8	1.5503	1.5758
Q3	136.7	136.4	-	-	Q3	173.4	172.9	1.5866	1.5952
Q4	136.5	136.1	-	-	Q4	173.3	173.2	1.6237	1.6148
1989 Q1	138.5	139.3	-	-	1999 Q1	173.0	172.3	1.6617	1.6526
Q2	139.5	140.7	1.0042	1.0040	Q2	172.1	173.2	1.6850	1.6913
Q3	140.2	139.7	1.0084	1.0080	Q3	174.2	175.4	1.7086	1.7309
Q4	141.6	142.3	1.0193	1.0120	Q4	174.1	175.6	1.7325	1.7714
1990 Q1	144.4	145.2	1.0303	1.0264	2000 Q1	179.4	179.8	1.7568	1.7962
Q2	144.5	144.6	1.0414	1.0410	Q2	180.3	180.8	1.7719	1.8213
Q3	144.3	144.4	1.0526	1.0558	Q3	181.6	182.5	1.7871	1.8468
Q4	148.9	150.9	1.0640	1.0707	Q4	183.5	184.1	1.8025	1.8727
1991 Q1	151.2	150.1	1.0755	1.0834	2001 Q1	186.9	186.8	1.8180	1.8888
Q2	149.1	148.8	1.0871	1.0962	Q2	185.6	186.4	1.8305	1.9050
Q3	153.0	152.8	1.0988	1.1091	Q3	186.9	186.8	1.8431	1.9214
Q4	155.5	156.1	1.1107	1.1222	Q4	186.1	185.7	1.8558	1.9379
1992 Q1	154.5	154.1	1.1227	1.1351	2002 Q1	186.4	184.7	1.8686	1.9513
Q2	152.9	153.7	1.1348	1.1481	Q2	184.2	186.4	1.8878	1.9648
Q3	153.5	154.1	1.1471	1.1613	Q3	185.6	186.4	1.9072	1.9784
Q4	156.1	156.5	1.1595	1.1747	Q4	189.9	-	1.9268	1.9921
1993 Q1	158.1	158.4	1.1720	1.1926	2003 Q1	190.6	-	1.9466	2.0126
Q2	157.3	157.5	1.1847	1.2107					
Q3	158.6	158.0	1.1975	1.2291					
Q4	160.7	161.0	1.2104	1.2478					
1994 Q1	162.1	162.1	1.2253	1.2621					
Q2	160.4	160.7	1.2404	1.2766					
Q3	164.1	164.6	1.2557	1.2913					
Q4	163.7	164.4	1.2711	1.3062					

Linking Factors

10/1/80 = 102.7
10/1/82 = 120.9
4Q87 = 132.2
4Q92 = 156.9
4Q97 = 173.2
4Q02 = 192.1

Preliminary RCAF = All-Inclusive Index Forecast / Linking Factor

Forecast Error = (All Actual/Linking Factor) - (All Forecast/Linking Factor)

where each is rounded to 3 digits after the decimal

where All for forecast error calculation is from 2 quarters earlier

RCAF Unadjusted = Preliminary RCAF less Forecast Error

RCAF Adjusted = RCAF Unadjusted divided by Productivity Adjustment Factor

Note: Each RCAF is rounded to 3 digits after the decimal.

**First Quarter 2003
All-Inclusive Index**

Ex Parte No. 290 (Sub-No. 5) (2003-1)

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

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

December 5, 2002

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Introduction

On January 2, 1985, the Interstate Commerce Commission (ICC) [now the Surface Transportation Board (STB)] adopted the All-Inclusive Index of Railroad costs as the basis for the Rail Cost Adjustment Factor (RCAF). The quarterly projection of railroad costs, as documented herein, employs the All-Inclusive Index as required by the regulations. Also presented in this submission is the RCAF, both Adjusted and Unadjusted, as required by the ICC in its decision in Ex Parte No. 290 (Sub-No. 4), *Rail Cost Recovery Procedures - Productivity Adjustment*, served March 24, 1989. In addition, the AAR has included (but does not endorse) the RCAF-5, which was instituted by an STB decision served October 3, 1996 in Ex Parte No. 290 (Sub-No. 7), *Productivity Adjustment - Implementation*. This quarter's projection of railroad costs is for the first quarter of 2003.

Rebasing

The Staggers Act of 1980 requires that the RCAF be rebased every five years. This means that the new base period will be the fourth quarter of 2002, since the previous base period was the fourth quarter of 1997. The calculations are shown below.

Rebasing the Denominator of the RCAF to the Fourth Quarter 2002	
1. Fourth Quarter 2002 Linked Index	189.9
2. Second Quarter 2002 Linked Index	
Calculated Using Actual Data	186.4
Calculated Using Forecasted Data	<u>184.2</u>
Difference	2.2
3. Fourth Quarter 2002 Linked Index	
Adjusted for Second Quarter 2002 Forecast Error	192.1
Note: Linked Indexes on this page refer to the All Inclusive Index, 1980=100 basis.	

Index Weights

In the Ex Parte No. 290 (Sub-No. 2) final rules, issued in April 1981, the Interstate Commerce Commission mandated that the weights of each major cost component be updated annually. These "external" weights are calculated using data from Schedules 410 and 210 of the R-1 annual report filed with the Surface Transportation Board by the Class I railroads. The weights are typically updated with the fourth quarter projection.

The previous (2000) weights were used for the fourth quarter of 2001 through the third quarter of 2002. Beginning with the fourth quarter of 2002, the 2001 weights are used. The biggest change in the weights was for Labor, which increased by 1.3 percentage points and moved closer to its weights for the late 1990s. Interest decreased by 0.8 percentage points to almost match its 1997 weight. The changes for the remaining components were by six tenths of a percentage point or less. The 2001 (current) and 2000 (previous) weights are shown below.

RCAF Weights		
	Previous 2000	Current 2001
Labor	36.5 %	37.8 %
Fuel	10.7	10.5
Materials & Supplies	4.8	4.6
Equipment Rents	11.1	10.5
Depreciation	10.2	10.6
Interest	4.6	3.8
Other	22.1	22.2

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

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

All-Inclusive Index

First Quarter 2003

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.

	2001 Weights	Forecast		Percent Change
		Previous 2002Q4	Current 2003Q1	
1. Labor	37.8%	267.6	269.7	0.8 %
2. Fuel	10.5%	103.5	100.7	-2.7
3. M&S	4.6%	148.6	144.2	-3.0
4. Equipment Rents	10.5%	175.9	175.2	-0.4
5. Depreciation	10.6%	149.7	149.6	-0.1
6. Interest	3.8%	98.6	98.6	0.0
7. Other	22.2%	160.2	162.2	1.2
8. Weighted Average				
a. 1980 = 100		192.5	193.2	
b. 1980 = 100 (linked)		189.9	190.6 ¹	
c. 4Q02 = 100		98.9	99.2 ²	0.3

¹ To calculate the 1980 = 100 Linked Index:

$$\begin{aligned}
 \text{Index}_{80} &= (\text{Current Index} / \text{Previous Index}) * \text{the Previous Quarter Linked Index} \\
 &= 193.2 \text{ divided by } 192.5 \text{ times } 189.9 \\
 &= 190.6
 \end{aligned}$$

² To calculate the 4Q02 = 100 index:

$$\begin{aligned}
 \text{Index}_{4Q02} &= (\text{Current Linked Index} / 4Q02 \text{ Linking Factor}) * 100 \\
 &= 190.6 \text{ divided by } 192.1 \text{ times } 100 \\
 &= 99.2
 \end{aligned}$$

4Q97 based index = 110.0

4Q92 based index = 121.5

4Q87 based index = 144.2

Forecast vs. Actual All-Inclusive Index Third Quarter 2002

As shown below, the third quarter actual index of 97.0 is 0.4 index points above the forecast value of 96.6. Thus, the forecast error adjustment in the first quarter 2003 is 0.4 index points.

	2000	Third Quarter 2002		Amt
	Weights	Forecast	Actual	Difference
1. Labor	36.5%	257.1	257.1	
2. Fuel	10.7%	94.4	91.5	
3. M&S	4.8%	149.9	149.9	
4. Equipment Rents ¹	11.1%	177.0	177.4	
5. Depreciation	10.2%	149.7	149.7	
6. Interest	4.6%	108.8	108.8	
7. Other	22.1%	160.1	160.5	
8. Weighted Average				
a. 1980 = 100		186.4	186.3	
b. 1980 = 100 (linked)		185.6	186.4 ²	
c. 4Q02 = 100 ³		96.6	97.0	0.4

Forecast error → 0.4 index points

¹	2000	Third Quarter 2002	
	Weights	Forecast	Actual
Car-Hire	52.8%	182.7	182.2
Lease Rentals	47.2%	160.1	160.5
Weighted Average		172.0	172.0
Weighted Average (linked)		177.0	177.4

² Linked actual index = (actual index / previous actual index) x previous linked actual index.
 $186.4 = 186.3 / 186.3 \times 186.4$

³ The 4Q02 based indexes are 1980 based indexes divided by the 4Q02 linking factor (192.1/100).
 4Q97 based indexes are the 1980 based indexes divided by the 4Q97 linking factor (173.2/100).
 4Q92 based indexes are the 1980 based indexes divided by the 4Q92 linking factor (156.9/100).

Productivity

On February 1, 2002, the STB served a decision in Ex Parte 290 (Sub-No. 4) which added the year 2000 to the Productivity Adjustment Factor (PAF) and deleted the year 1995. This creates an average annual productivity for 1996 through 2000 of 4.2 percent – an increase from the 1995 through 1999 average of 2.8 percent. The components of this average annual value are shown on the following table. Productivity changes are calculated by dividing the output index by the input index. The average annual rate is calculated by multiplying each of the five productivity changes together and taking the result to the one fifth power. The quarterly productivity adjustment factors (PAF) are calculated by increasing the previous quarter's PAF by quarterly versions of the annual rate which are the fourth root of the average annual growth rate. The difference between the PAF and the PAF-5 is the timing of the 5-year productivity trend.

Comparison of Output, Input, & Productivity

1996 - 2000

Year	Output Index (1)	Input Index (2)	Productivity Changes (3)
1996	1.038	0.913	1.137
1997	1.007	1.019	0.988
1998	1.005	1.018	0.987
1999	1.028	1.003	1.025
2000	1.028	0.950	<u>1.082</u>
Average			1.042
Previous Average (1995-1999)			1.028

Calculation of PAF and PAF-5

For 1996-2000 use fourth root of avg. productivity change 1.0103
 For 1995-1999 use fourth root of previous avg. change 1.0069

Quarter	Year	PAF	PAF-5	
Q1	2002	1.8686	1.9513	1995-1999
Q2	2002	1.8878	1.9648	
Q3	2002	1.9072	1.9784	1996-2000
Q4	2002	1.9268	1.9921	
Q1	2003	1.9466	2.0126	

Rail Cost Adjustment Factor

First Quarter 2003

Four RCAF values are presented in this filing. Two of the indexes, the All-Inclusive Index and the Unadjusted RCAF, are not modified for productivity, while the Adjusted RCAF and the RCAF-5 incorporate a productivity calculation. The All-Inclusive Index and all four RCAF values, plus the percent change for each, are shown below.

	Previous 2002Q4	Current 2003Q1	Percent Change
All-Inclusive Index ¹	98.9	99.2	0.3
Preliminary RCAF ²	0.989	0.992	0.3
Forecast Error Adjustment ³	<u>0.011</u>	<u>0.004</u>	
RCAF (Unadjusted) ⁴	1.000	0.996	-0.4
Productivity Adjustment Factor ⁵	1.9268	1.9466	
RCAF (Adjusted) ⁶	0.519	0.512	-1.3
PAF-5 ⁷	1.9921	2.0126	
RCAF-5 ⁸	0.502	0.495	-1.4

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 2003

The first quarter 2003 Labor Index is forecast to increase 0.8 percent, caused in part by wage increases and higher health and welfare costs. The Wage Index increased 1.0 percent, and the Supplements Index increased 0.5 percent.

Wage Index

National Contracts: On November 1, 2002, the International Brotherhood of Boilermakers and Blacksmiths (IBBM) signed a new agreement with the National Carriers' Conference Committee. The agreement is similar to the recent United Transportation Union (UTU) contract, and affects a group of railroads that includes 5 Class I railroads. Highlights of the agreement are as follows: a \$600 Signing Bonus; the 48 cent cost-of-living allowance (already in the index) is rolled into basic rates of pay effective June 30, 2002; a 4 percent (retroactive) general wage increase effective July 1, 2002. Additional general wage increases are 2½ percent effective July 1, 2003; and 3 percent effective July 1, 2004.

The UTU, UTU-Yardmasters, and Brotherhood of Maintenance of Way Employees (BMWE) have relatively new agreements, and do not have wage increases scheduled for January 1. The other unions, which are still operating under the 1996 national agreements, will receive an 11 cent increase in their cost of living allowances. Non-union employees were assigned the same 4 percent increase that the UTU, UTU-Yardmasters, and IBBM received, effective January 1, 2003.

Independent Contracts: A new contract for Canadian National's Grand Trunk Railroad and its train dispatchers was added to the wage index. This contract, which was signed on October 31, 2002, contains two retroactive wage increases of 3 percent plus a 3 percent increase effective at the beginning of 2003. Five additional Grand Trunk unions also had 3 percent increases effective January 1, 2003. Those unions are the Transportation Communication International Union (TCU), the Sheet Metal Workers' International Association (SMW), the BMWE, the TCU's Brotherhood of Railway Carmen Division, and the International Brotherhood of Firemen and Oilers. All of Canadian Pacific's Soo Line unions except the BMWE will receive an 11 cent increase in their cost of living allowance effective January 1, 2003.

Lump Sums & Back Pay: The lump sum adjustment increased by 0.1 cents, and the back pay adjustment increased 0.2 cents. Both adjustments had two amounts added, plus one amount removed because it was completely amortized. Lump sum amounts were added for the signing bonuses in the new national IBBM and GTW dispatcher's contracts. These contracts also had retroactive wage increases causing back pay. Signing bonuses and retroactive wage increase amounts for Illinois Central's IBBM and International Brotherhood of Electrical Workers were completely amortized, and removed from the lump sum and back pay adjustments.

Labor

First Quarter 2003

Other: This component contains the amortization of a profit sharing payment that the BNSF made to its Brotherhood of Locomotive Engineers employees from the former Atchison, Topeka and Santa Fe Railway in early 2002 for performance in 2001. The adjustment of \$0.002 is unchanged from the prior two quarters.

Supplements Index

The Supplements Index is forecast to increase by 0.5 percent from the fourth quarter filing. Much of this change was caused by new rates for Railroad Retirement and health & welfare.

Health & Welfare: The Health & Welfare hourly rate increased 8 percent from the fourth quarter level because of the new 2003 rates. Page 4 of this appendix compares various supplement rates, and page 5 shows the National Railway Labor Conference memo that lists the 2003 rates.

Railroad Retirement: Higher wages and higher tax maximums for 2003 were offset by the lower Tier II tax rate, which caused the Railroad Retirement and Medicare hourly rate to decrease 4.5 percent.

Unemployment Insurance: Railroad unemployment insurance rates are experienced-rated by employer and will range from 3.15 (0.65 plus a 2.5 percent surcharge) to 12 percent on monthly employee compensation up to \$1,120. The weighted-average 2003 unemployment insurance rate for the Class I railroads used in the latest benchmarking is 4.55 percent. The combination of the higher rate and a higher taxable amount caused an increase in the hourly rate of 5.8 cents.

Other: The "Other" category, a reflection of a quarterly employer matching contribution by BNSF to certain BMW and Brotherhood of Locomotive Engineers employees, is unchanged.

Labor Index Calculation

As shown in table A-1 on the next page, the 1.0 percent increase in the Wage Index and the 0.5 percent increase in the Supplements Index had a combined effect of a 0.8 percent increase in the Labor Index. The linked first quarter 2003 index is 269.7.

Table A-1 Labor Index

¹ 1980 wage rate	\$11.685	
² 1980 supplements rate	\$2.706	
³ 2001 weights: wages, supplements	72.0%	28.0%
⁴ 2003Q1 linked Index = 2002Q4 linked x (2003Q1 / 2002Q4)		
	= 267.6 x 280.2 / 278.0	

Labor

First Quarter 2003

Supplement Comparisons

Health and Welfare Rates

Plan	Railroad Contribution Per Employee Per Month				
	2001	2002	2003	Change	
				'01-'03	'02-'03
Group Health & Life	\$705.52	\$836.48	\$875.93	24.2%	4.7%
Early Retirement Major Medical*	30.35	40.09	65.73	116.6%	64.0%
Group Dental	43.27	43.41	52.20	20.6%	20.2%
Group Vision	7.51	8.40	8.61	14.6%	2.5%
Supplemental Sickness					
Maintenance of Way	24.53	33.32	39.25	60.0%	17.8%
Shop Crafts	38.51	46.22	47.50	23.3%	2.8%
Signalmen	23.59	32.24	31.75	34.6%	-1.5%
Yardmasters	29.65	32.18	31.33	5.7%	-2.6%

* Early Retirement Major Medical rate was \$31.00 for January and February of 2002.

Railroad Retirement and Medicare

	Earnings Base			Employer Rate		
	2001	2002	2003	2001	2002	2003
Tier I	\$80,400	\$84,900	\$87,000	6.20%	6.20%	6.20%
Tier II	59,700	63,000	64,500	16.10%	15.60%	14.20%
Medicare	no limit	no limit	no limit	1.45%	1.45%	1.45%

Unemployment Insurance

Monthly Taxable Earnings Base			Weighted Avg. Class I Rate		
2001	2002	2003	2001	2002	2003
\$1,050	\$1,100	\$1,120	2.15%	3.81%	4.55% *

* 4.61 percent if Wisconsin Central is included. Current RCAF calculations use 2001 wage statistics and annual report data which do not include Wisconsin Central. Beginning 2003Q4, 2002 wage statistics and annual report data will be used that include Wisconsin Central as part of Canadian National's consolidated reporting known as GT Corp. — so 4.61 percent will be used at that time.

Supplemental Annuity

This payroll tax was abolished effective 2002.

Labor

First Quarter 2003

01-14-2002 09:12

NRLC

202 862 7253 P.02

NATIONAL RAILWAY LABOR CONFERENCE

EMPLOYEE BENEFITS DEPARTMENT

1001 L STREET, N.W., WASHINGTON, D.C. 20036-3514 0000 PHONE: (202) 862-7200 FAX: (202) 862-7253

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November 14, 2002

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

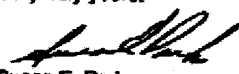
Dear Mr. Crimmel:

The revised employer Payment Rates which are effective January 1, 2003 are as follows:

UNUMProvident - Supplemental Sickness Plans	
ShopCrafts	\$ 47.60
Signalmen	\$ 31.75
Maintenance of Way	\$ 39.25
Trustmark - Supplemental Sickness Plans	
Yardmasters	\$ 31.33
Railroad Employees National Health & Welfare Plan & National Railway Carriers/United Transportation Union H&W Plan	
Non-Hospital Road	\$675.93
Railroad Employees National Early Retirement Major Medical Benefit Plan	
Non-Hospital Road	\$ 65.73
Aetna - National Dental Plan	\$ 52.20
VSP - National Vision Plan	\$ 6.61

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

Very truly yours,


Susan E. Parks

cc: Carol Kearns

TOTAL P.02

Association of American Railroads

Fuel

First Quarter 2003

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 discussions with their major suppliers, and (3) a consensus of petroleum industry experts and general business publications.

First quarter (January 2003) fuel prices are expected to decrease 6.6 percent from the fourth quarter (October) actual level – a 2.7 percent decrease from the fourth quarter forecast. OPEC production in both September and October climbed to the highest levels seen in 2002, causing anticipation of an increase in supply.

Forecast fuel index	100.7
Change from previous quarter forecast	-2.7%
Change from previous quarter actual	-6.6%

Materials & Supplies

First Quarter 2003

The Materials & Supplies index decreased by 3.0 percent in the first quarter 2003. Ballast prices caused much of the decrease.

2003Q1 Materials & Supplies Index = 144.2

2002Q4 Materials & Supplies Index = 148.6

Difference	-4.4 basis points
	or
	-3.0 %

Equipment Rents

First Quarter 2003

The equipment rents index consists of two components -- car hire and lease rentals. The methodology used to create these two components and the final equipment rents index are explained below.

Car Hire

The car hire component is indexed using data from the Car Hire Accounting Rate Master (CHARM) file. Car hire rates for the forecast quarter are estimated based on data for the most recent month available. For the first quarter, December 1 of the previous year is used. For the second, third and fourth quarters; March 1, June 1, and September 1 are used, respectively. Using data retrieved from the latest CHARM file, an average rate per car is developed. Next, those average rates are grouped into car type categories to create an overall summary of car hire rates. The summary rates are then compared from quarter to quarter to determine the car hire index.

Lease Rentals

The lease rental 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 Rent Index Calculation

The table below calculates the Equipment Rent Index. To eliminate any changes caused by the fourth quarter's new weights, the third quarter weighted average (but not the linked value) has been recalculated using the new weights. The third quarter weighted average using the old weights was 172.0. Much of the decrease in the Car Hire Index was caused by lower rates in privately-owned cars other than tank cars, auto racks, and covered hoppers.

	2001 Weight	2002Q4	2003Q1	Percent Change
Car Hire	51.5%	180.3	177.2	-1.7 %
Lease Rentals	48.5%	160.2	162.2	1.2
Weighted Average		170.6	169.9	-0.4
Weighted Average (Linked)		175.9	175.2	-0.4

Depreciation

First Quarter 2003

The Producer Price Index for Railroad Equipment (PPI-RE) is used to index depreciation expense. The PPI-RE 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 be the most recent monthly data 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 value for the forecast, decreased slightly from the previous quarter's forecast, reflects a PPI-RE that does not have a consistent trend of increases or decreases.

Forecasted depreciation index (1982=100)	135.2
Forecasted depreciation index (1980=100)	149.6

Change from previous quarter forecast	-0.1%
Change from actual first month of previous quarter	0.7%
Change from same quarter of prior year (actual)	0.7%

Depreciation

First Quarter 2003

PPI RAIL EQUIPMENT

Forecast Model for PPIRE
ARIMA(0,0,1)

Term	Coefficient	Std. Error	t-Statistic	Significance
b[1]	-0.5268	0.0858	-6.1418	1.0000
_CONST	135.1764			

Within-Sample Statistics

Sample size 72	Number of parameters 1
Mean 135.2	Standard deviation 1.209
R-square 0.264	Adjusted R-square 0.264
Durbin-Watson 1.863	Ljung-Box(18)=6.606 P=0.00695
Forecast error 1.037	BIC 1.061
MAPE 0.0042	RMSE 1.03
MAD 0.5709	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2002-05	135.200
2002-06	135.400
2002-07	135.800
2002-08	135.400
2002-09	134.700
2002-10	134.200

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2002-11	132.765	134.784	136.803
2002-12	132.894	135.176	137.459
2003-01	132.894	135.176	137.459
2003-02	132.894	135.176	137.459
2003-03	132.894	135.176	137.459
QTR AVG	132.894	135.176	137.459
2003-04	132.894	135.176	137.459
2003-05	132.894	135.176	137.459
2003-06	132.894	135.176	137.459

Interest

First Quarter 2003

The Interstate Commerce Commission, in its decision served February 28, 1989, revised the All-Inclusive Index methodology to include a specific interest component, which is to track changes in the average interest rate from year to year. The interest rate is essentially the embedded cost of debt, i.e., total interest expense divided by average total long term debt. The interest rate is calculated for the most recent year and used until the next year's figures are available. Typically in the fourth quarter filing, the interest rate is updated to the new level. The source for interest expense is Schedule 210, column b, from the R-1 annual report. The lines used from current R-1 annual reports are listed below. The source for average total debt is Schedule 200 from the R-1 annual report. The sums of data from columns b and c (ending and beginning balances) are combined and divided by 2 to compute an average balance. The line numbers are listed below.

Interest Expense (Schedule 210)

Line	
42	Total Fixed Charges
44	Contingent Interest
less	
22	Release of Premium on Funded Debt

Average Total Debt (Schedule 200)

Line	
30	Current Loans and Notes Payable
39	Equipment Obligations and Other Long Term Debt Due Within One Year
41	Funded Debt Unmatured - Non-Current
42	Equipment Obligations - Non-Current
43	Capitalized Lease Obligations - Non-Current
44	Debt in Default - Non-Current
45	Accounts Payable: Affiliated Companies - Non-Current
46	Unamortized Debt Premium - Non-Current

2001	Interest Rate	7.74%
1980	Interest Rate	7.85%
2003Q1	Interest Index	98.6
2002Q4	Interest Index	98.6
	Percent Change	0.0%

Other Expenses

First Quarter 2003

The Producer Price Index for Industrial Commodities less Fuel 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 be the most recent monthly data 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 reflects monthly PPI-LF figures that have decreased only one time in 2002 and are now at an all-time high.

Forecasted Other Expense (1982=100)	144.7
Forecasted Other Expense (1980=100)	162.2
Change from previous quarter forecast	1.2%
Change from actual first month of previous quarter	0.6%
Change from same quarter of prior year (actual)	1.7%

Other Expenses

First Quarter 2003

PPI INDUSTRIAL COMMODITIES LESS FUEL AND RELATED PRODUCTS AND POWER

Forecast Model for PPILF

ARIMA(1,1,2)*(1,0,1) with log transform

Term	Coefficient	Std. Error	t-Statistic	Significance
a[1]	0.8528	0.0971	8.7818	1.0000
b[1]	0.6914	0.1360	5.0821	1.0000
b[2]	-0.2587	0.1213	-2.1329	0.9633
A[12]	0.9929	0.0219	45.3560	1.0000
B[12]	0.7678	0.0595	12.9101	1.0000

Within-Sample Statistics

Sample size 72	Number of parameters 5
Mean 4.948	Standard deviation 0.0136
R-square 0.9905	Adjusted R-square 0.9899
Durbin-Watson 1.862	Ljung-Box(18)=19.83 P=0.6575
Forecast error 0.001365	BIC 0.2152
MAPE 0.001038	RMSE 0.1861
MAD 0.1465	

Actual Values for the Most Recent 6 Periods:

Date	Actual
2002-05	142.700
2002-06	143.000
2002-07	143.100
2002-08	143.200
2002-09	143.200
2002-10	143.900

Forecasted Values

Date	2.5 Lower	Forecast	97.5 Upper
2002-11	143.516	143.889	144.264
2002-12	143.553	144.126	144.701
2003-01	143.657	144.475	145.298
2003-02	143.593	144.677	145.769
2003-03	143.580	144.940	146.312
QTR AVG	143.610	144.697	145.793
2003-04	143.585	145.223	146.880
2003-05	143.343	145.256	147.195
2003-06	143.195	145.380	147.599