

ASSOCIATION  
OF AMERICAN  
RAILROADS

Craig F. Rocky  
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

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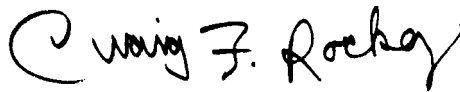
The Staggers Act requires that the RCAF be rebased every five years. The procedure necessary to calculate this rebasing was outlined by the ICC in Ex Parte No. 290 (Sub-No. 5) effective January 1, 1988. The rebasing calculation which will bring the index to the fourth quarter 2002 base is shown on page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

Craig F. Rockey

Attachments

# Rail Cost Adjustment Factor — 2002Q4 Base

Attachment A

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| Yr/Qtr<br>(Col 1) | Preliminary<br>RCAF<br>(Col 2) | Forecast<br>Error<br>Adjustment<br>(Col. 3) | RCAF<br>(Unad-<br>justed)<br>(Col 4) | Productivity-Adjusted RCAF                      |                               | STB's 2nd Productivity-<br>Adjusted RCAF<br>(Not endorsed by AAR) |                   |
|-------------------|--------------------------------|---------------------------------------------|--------------------------------------|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------|-------------------|
|                   |                                |                                             |                                      | Productivity<br>Adjustment<br>Factor<br>(Col 5) | RCAF<br>(Adjusted)<br>(Col 6) | PAF-5<br>(Col 7)                                                  | RCAF-5<br>(Col 8) |
| <b>1992</b> 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             |
| <b>1993</b> 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             |
| <b>1994</b> 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             |
| <b>1995</b> 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             |
| <b>1996</b> 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             |
| <b>1997</b> 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             |
| <b>1998</b> 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             |
| <b>1999</b> 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             |
| <b>2000</b> 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             |
| <b>2001</b> 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             |
| <b>2002</b> 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             |
| <b>2003</b> Q1    | 0.992                          | 0.004                                       | 0.996                                | 1.9466                                          | 0.512                         | 2.0126                                                            | 0.495             |

# Rail Cost Adjustment Factor — 2002Q4 Base

| Yr/Qtr<br>(Col 1) | Preliminary<br>RCAF<br>(Col 2) | Forecast<br>Error<br>Adjustment<br>(Col. 3) | RCAF<br>(Unad-<br>justed)<br>(Col 4) | Productivity-Adjusted RCAF                      |                               | STB's 2nd Productivity-<br>Adjusted RCAF<br>(Not endorsed by AAR) |                   |
|-------------------|--------------------------------|---------------------------------------------|--------------------------------------|-------------------------------------------------|-------------------------------|-------------------------------------------------------------------|-------------------|
|                   |                                |                                             |                                      | Productivity<br>Adjustment<br>Factor<br>(Col 5) | RCAF<br>(Adjusted)<br>(Col 6) | PAF-5<br>(Col 7)                                                  | RCAF-5<br>(Col 8) |
| <b>1985</b> Q2    | 0.656                          | -                                           | -                                    |                                                 |                               |                                                                   |                   |
| Q3                | 0.654                          | -                                           | -                                    |                                                 |                               |                                                                   |                   |
| Q4                | 0.637                          | -                                           | -                                    |                                                 |                               |                                                                   |                   |
| <b>1986</b> Q1    | 0.673                          | -                                           | -                                    |                                                 |                               |                                                                   |                   |
| Q2                | 0.644                          | -                                           | -                                    |                                                 |                               |                                                                   |                   |
| Q3                | 0.654                          | -                                           | -                                    |                                                 |                               |                                                                   |                   |
| Q4                | 0.657                          | -                                           | -                                    |                                                 |                               |                                                                   |                   |
| <b>1987</b> Q1    | 0.674                          | -0.005                                      | 0.669                                |                                                 |                               |                                                                   |                   |
| Q2                | 0.673                          | -0.001                                      | 0.672                                |                                                 |                               |                                                                   |                   |
| Q3                | 0.679                          | 0.005                                       | 0.684                                |                                                 |                               |                                                                   |                   |
| Q4                | 0.684                          | 0.004                                       | 0.688                                |                                                 |                               |                                                                   |                   |
| <b>1988</b> 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                                |                                                 |                               |                                                                   |                   |
| <b>1989</b> Q1    | 0.721                          | -0.002                                      | 0.719                                |                                                 |                               |                                                                   |                   |
| Q2                | 0.726                          | -0.003                                      | 0.723                                | 1.0042                                          | 0.720                         | 1.0040                                                            | 0.720             |
| Q3                | 0.730                          | 0.004                                       | 0.734                                | 1.0084                                          | 0.728                         | 1.0080                                                            | 0.728             |
| Q4                | 0.737                          | 0.006                                       | 0.743                                | 1.0193                                          | 0.729                         | 1.0120                                                            | 0.734             |
| <b>1990</b> 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             |
| <b>1991</b> 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             |

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.]

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.]

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".

# Sample Rebasing Calculations

## ***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):

$$2001Q1 \text{ on } 4Q02 \text{ basis} = 186.9 / 192.1 = .9729307 = 0.973$$

$$2001Q1 \text{ on } 4Q97 \text{ basis} = 186.9 / 173.2 = 1.079099 = 1.079$$

$$2001Q1 \text{ on } 4Q92 \text{ basis} = 186.9 / 156.9 = 1.1912045 = 1.191$$

### **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:

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

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

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

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

### **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)***

RCAF (Unadjusted) = Preliminary RCAF + Forecast Error Adjustment.

$$\text{Example for } 2001Q1, 4Q02 \text{ basis: } 0.973 + 0.005 = 0.978$$

## ***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)***

RCAF (Adjusted) = RCAF (Unadjusted) / Productivity Adjustment Factor.

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

## ***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***

RCAF-5 = RCAF (Unadjusted) / PAF-5

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

# Indexes & Factors for RCAF Rebasing

| Yr/Qtr         | All Inclusive Index<br>1980 = 100 |        | Prod.<br>Adj.<br>Factor | PAF-5  | Yr/Qtr         | All Inclusive Index<br>1980 = 100 |        | Prod.<br>Adj.<br>Factor | PAF-5  |
|----------------|-----------------------------------|--------|-------------------------|--------|----------------|-----------------------------------|--------|-------------------------|--------|
|                | Forecast                          | Actual |                         |        |                | Forecast                          | Actual |                         |        |
| <b>1985</b> Q1 | -                                 | -      | -                       | -      | <b>1995</b> 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 |
| <b>1986</b> Q1 | 129.3                             | 128.4  | -                       | -      | <b>1996</b> 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 |
| <b>1987</b> Q1 | 129.5                             | 130.4  | -                       | -      | <b>1997</b> 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 |
| <b>1988</b> Q1 | 135.1                             | 135.2  | -                       | -      | <b>1998</b> 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 |
| <b>1989</b> Q1 | 138.5                             | 139.3  | -                       | -      | <b>1999</b> 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 |
| <b>1990</b> Q1 | 144.4                             | 145.2  | 1.0303                  | 1.0264 | <b>2000</b> 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 |
| <b>1991</b> Q1 | 151.2                             | 150.1  | 1.0755                  | 1.0834 | <b>2001</b> 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 |
| <b>1992</b> Q1 | 154.5                             | 154.1  | 1.1227                  | 1.1351 | <b>2002</b> 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 |
| <b>1993</b> Q1 | 158.1                             | 158.4  | 1.1720                  | 1.1926 | <b>2003</b> 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 |                |                                   |        |                         |        |
| <b>1994</b> 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 |                |                                   |        |                         |        |

|                        |
|------------------------|
| <b>Linking Factors</b> |
| 10/1/80 = 102.7        |
| 10/1/82 = 120.9        |
| 4Q87 = 132.2           |
| 4Q92 = 156.9           |
| 4Q97 = 173.2           |
| 4Q02 = 192.1           |

|                                                                                     |
|-------------------------------------------------------------------------------------|
| <b>Preliminary RCAF</b> = All-Inclusive Index Forecast / Linking Factor             |
| <b>Forecast Error</b> = (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                 |
| <b>RCAF Unadjusted</b> = Preliminary RCAF less Forecast Error                       |
| <b>RCAF Adjusted</b> = 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.

| <b>Rebasing the Denominator of the RCAF<br/>to the Fourth Quarter 2002</b>          |              |
|-------------------------------------------------------------------------------------|--------------|
| 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.

| <b>RCAF Weights</b>  |                  |                 |
|----------------------|------------------|-----------------|
|                      | Previous<br>2000 | Current<br>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<br>Weights | Forecast           |                    | Percent<br>Change |
|------------------------|-----------------|--------------------|--------------------|-------------------|
|                        |                 | Previous<br>2002Q4 | Current<br>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 <sup>1</sup> |                   |
| c. 4Q02 = 100          |                 | 98.9               | 99.2 <sup>2</sup>  | 0.3               |

---

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

$$\text{Index}_{80} = (\text{Current Index} / \text{Previous Index}) * \text{the Previous Quarter Linked Index}$$

$$= 193.2 \text{ divided by } 192.5 \text{ times } 189.9$$

$$= 190.6$$

<sup>2</sup> To calculate the 4Q02 = 100 index:  

$$\text{Index}_{4Q02} = (\text{Current Linked Index} / 4Q02 \text{ Linking Factor}) * 100$$

$$= 190.6 \text{ divided by } 192.1 \text{ times } 100$$

$$= 99.2$$

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<br>Weights | Third Quarter 2002 |                    | Amt<br>Difference |
|---------------------------------|-----------------|--------------------|--------------------|-------------------|
|                                 |                 | Forecast           | Actual             |                   |
| 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 <sup>1</sup> | 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 <sup>2</sup> |                   |
| c. 4Q02 = 100 <sup>3</sup>      |                 | 96.6               | 97.0               | 0.4               |

**Forecast error**       $\longrightarrow$       **0.4 index points**

| <sup>1</sup>              | 2000<br>Weights | Third Quarter 2002 |        |
|---------------------------|-----------------|--------------------|--------|
|                           |                 | 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  |

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

<sup>3</sup> 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.

| <b>Comparison of Output, Input, &amp; Productivity</b> |                     |                    |                             |
|--------------------------------------------------------|---------------------|--------------------|-----------------------------|
| <b>1996 - 2000</b>                                     |                     |                    |                             |
| Year                                                   | Output Index<br>(1) | Input Index<br>(2) | Productivity Changes<br>(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                       |

| <b>Calculation of PAF and PAF-5</b>                       |      |        |        |
|-----------------------------------------------------------|------|--------|--------|
| 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 |
| Q2                                                        | 2002 | 1.8878 | 1.9648 |
| Q3                                                        | 2002 | 1.9072 | 1.9784 |
| Q4                                                        | 2002 | 1.9268 | 1.9921 |
| Q1                                                        | 2003 | 1.9466 | 2.0126 |

1995-1999

1996-2000

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

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

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

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

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

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

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

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

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

# Appendixes



## Labor

### 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.



**Labor**  
**First Quarter 2003**

**Supplement Comparisons**

**Health and Welfare Rates**

| Plan                            | Railroad Contribution<br>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<br>Earnings Base |         |         | Weighted Avg.<br>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

NY-14-2002 09:12

NRLC

202 862 7253 P.02

### NATIONAL RAILWAY LABOR CONFERENCE EMPLOYEE BENEFITS DEPARTMENT

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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

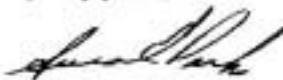
Dear Mr. Crimmel:

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

|                                                                                                                       |          |
|-----------------------------------------------------------------------------------------------------------------------|----------|
| UNUMProvident - Supplemental Sickness Plans                                                                           |          |
| ShopCrafts                                                                                                            | \$ 47.50 |
| Signalmen                                                                                                             | \$ 31.75 |
| Maintenance of Way                                                                                                    | \$ 39.25 |
| Trustmark - Supplemental Sickness Plans                                                                               |          |
| Yardmasters                                                                                                           | \$ 31.33 |
| Railroad Employees National Health & Welfare Plan &<br>National Railway Carriers/United Transportation Union H&W Plan |          |
| Non-Hospital Road                                                                                                     | \$875.93 |
| Railroad Employees National Early Retirement<br>Major Medical Benefit Plan                                            |          |
| Non-Hospital Road                                                                                                     | \$ 65.73 |
| Aetna - National Dental Plan                                                                                          | \$ 52.20 |
| VSP - National Vision Plan                                                                                            | \$ 8.61  |

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

Very truly yours,

  
Susan E. Parks

cc: Carol Kearns

TOTAL P.02

## 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   |        |        | Percent |
|---------------------------|--------|--------|--------|---------|
|                           | Weight | 2002Q4 | 2003Q1 | 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        |
| <b>QTR AVG</b> | <b>132.894</b> | <b>135.176</b> | <b>137.459</b> |
| 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%       |
| <b>2003Q1</b> | <b>Interest Index</b> | <b>98.6</b> |
| 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        |
| <b>QTR AVG</b> | <b>143.610</b> | <b>144.697</b> | <b>145.793</b> |
| 2003-04        | 143.585        | 145.223        | 146.880        |
| 2003-05        | 143.343        | 145.256        | 147.195        |
| 2003-06        | 143.195        | 145.380        | 147.599        |