

RECEIVED

SEP 24 1 36 PM '01

POSTAL RATE COMMISSION
OFFICE OF THE SECRETARY

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

POSTAL RATE AND FEE CHANGES, 2001

Docket No. R2001-1

DIRECT TESTIMONY
OF
PHILIP A. HATFIELD
ON BEHALF OF
UNITED STATES POSTAL SERVICE

TABLE OF CONTENTS

<u>AUTOBIOGRAPHICAL SKETCH</u>	iii
<u>ASSOCIATED LIBRARY REFERENCES</u>	v
<u>USPS LR-J-94: FedEx Rollforward Adjustments</u>	v
<u>USPS LR-J-95: Base Year Air Volumes by Air Class Tag (ACT)</u>	v
<u>USPS LR-J-96: Estimation of Priority Mail Weight and Average Haul by Zone</u>	v
<u>I. PURPOSE AND SCOPE</u>	1
<u>II. OVERVIEW</u>	2
<u>A. Background of FedEx Transportation Agreement</u>	2
<u>B. Impact on Air Transportation Operations and Costs</u>	3
<u>C. Need for Rollforward Adjustment</u>	4
<u>D. Overview of Methodology</u>	5
<u>III. ESTIMATION OF TRANSPORTATION COSTS WITHOUT FEDEX</u>	5
<u>A. Input Data</u>	6
<u>B. Method Used to Estimate Costs by Cost Pool</u>	9
<u>C. Results</u>	13
<u>IV. DEVELOPMENT OF FEDEX DISTRIBUTION KEYS</u>	15
<u>A. Input Data</u>	15
<u>B. Method Used to Develop Distribution Keys</u>	16
<u>C. Results</u>	17
<u>V. ESTIMATION OF TRANSPORTATION COSTS WITH FEDEX</u>	20
<u>A. Input Data</u>	20
<u>B. Method Used to Estimate Costs</u>	25

C. Results31

VI. DEVELOPMENT OF ROLLFORWARD ADJUSTMENTS.....35

A. Rollforward Mechanics35

B. Calculating Rollforward Adjustments36

C. Results38

VII. BASE YEAR PRIORITY MAIL AIR VOLUMES BY ZONE41

1 AUTOBIOGRAPHICAL SKETCH

2 My name is Philip A. Hatfield and I am a Principal Consultant in the
3 Washington Consulting Practice at PricewaterhouseCoopers LLP (hereafter PwC) in
4 Arlington, Virginia. I have been with PwC since 1994.

5 My work at PwC has been devoted to serving the United States Postal
6 Service and I am a member of PwC's Mail Package and Freight industry team. I
7 have worked on many projects for the United States Postal Service, specializing in
8 transportation network operations, cost estimation, rate design analyses, and
9 financial analysis. My experience with the Postal Service includes volume variable
10 cost analysis in transportation and mail processing.

11 Most recently, I have been working with the Postal Service to establish and
12 implement the recently formed transportation agreement with FedEx. This work has
13 consisted of financial and operational consulting designed to estimate the financial
14 implications of the agreement and to assist in developing the implementation plan.

15 Over the past seven years, I have visited a number of Postal Service field
16 offices including airport mail facilities (AMFs), bulk mail centers (BMCs), processing
17 and distribution centers (P&DCs), and associate post offices (AOs). During these
18 visits, I observed transportation operations, transportation cost system (TRACS)
19 tests, mail processing operations, and delivery operations.

20 I have appeared before the Postal Rate Commission previously on two
21 separate occasions. In Docket No. R97-1, I presented direct testimony with regard
22 to Parcel Post transportation costs. Also in Docket No. R97-1, I presented testimony
23 with regard to presorted First-Class Mail processing costs.

1 I received a bachelor's degree in Economics from The College of William and
2 Mary in 1994, *magna cum laude*. I received a master's degree in Business
3 Administration from The Wharton School at the University of Pennsylvania in 2000
4 where I specialized in Operations and Information Management. At Wharton, I
5 received academic distinction as a Palmer Scholar.

1 ASSOCIATED LIBRARY REFERENCES

2 The following Library References are associated with my testimony:

3 USPS LR-J-94: FedEx Rollforward Adjustments

4 This library reference contains printed and electronic versions of
5 the spreadsheets that were used to develop the FedEx rollforward
6 adjustments that are described in my testimony. Witness
7 Patelunas (USPS-T-12) uses these adjustments in developing test
8 year Purchased Transportation Costs.

9 USPS LR-J-95: Base Year Air Volumes by Air Class Tag (ACT)

10 This library reference contains printed and electronic
11 documentation of the computer programs used to calculate total
12 base year air volumes by ACT. The results of this library reference
13 are used in LR-J-94, FedEx Rollforward Adjustments.

14 USPS LR-J-96: Estimation of Priority Mail Weight and Average Haul by Zone

15 This library reference contains printed and electronic
16 documentation of the computer programs used to calculate base
17 year Priority Mail air volumes by zone. Witness Scherer (USPS-T-
18 30) uses the results of this library reference in developing Priority
19 Mail rates.

1 I. PURPOSE AND SCOPE

2 The purpose of my testimony is to estimate the impact in FY2002 and
3 FY2003 of the recently formed transportation agreement between the Postal Service
4 and FedEx on purchased transportation costs. The results of my analyses are used
5 in the Postal Service rollforward process to account for the cost impact of the FedEx
6 transportation agreement in the development of test year costs. The scope of my
7 testimony includes only changes in purchased transportation costs that are the result
8 of implementation of the FedEx transportation agreement.

9 My testimony also incorporates an analysis of base year Priority Mail air
10 volumes by zone, which is used in the Priority Mail rate design.

1 II. OVERVIEW

2 Earlier this year, the Postal Service entered into a transportation agreement
3 with FedEx, whereby FedEx will provide air transportation on its networks to the
4 Postal Service. This agreement represents a change in the way certain Postal
5 Service mail volumes will travel through the Postal Service networks. As a result of
6 this agreement, the costs associated with transporting mail, in total and for individual
7 products, will change. This testimony describes and documents the estimation of
8 the cost impact of the FedEx transportation agreement. The remainder of this
9 section of the testimony will provide some relevant background information about the
10 transportation agreement itself, describe the impact that this agreement will have on
11 future transportation costs, explain the need for a specific adjustment to the
12 rollforward process, and provide an overview of the methodology used to produce
13 the transportation cost estimates and the rollforward adjustments.

14 A. Background of FedEx Transportation Agreement

15 In general, the transportation agreement specifies that FedEx will provide air
16 transportation for Postal Service mail on both the FedEx day turn and night turn air
17 networks. As discussed by witness Spatola in his testimony (USPS-T-20), Postal
18 Service volume will share air capacity with FedEx's own volume on both of these
19 networks. The FedEx capacity purchased by the Postal Service will serve to replace
20 existing dedicated air transportation.

1 B. Impact on Air Transportation Operations and Costs

2 Based on the terms of the transportation agreement and the Postal Service's
3 intended use of FedEx air capacity, the cost implications of this agreement are
4 predictable. The following is a general discussion of the ways in which Postal
5 Service purchased transportation costs will change as a result of the FedEx
6 transportation agreement. The methodology used to quantify these changes is
7 discussed later in this testimony.

8 First, the FedEx transportation agreement will tend to decrease overall
9 purchased air transportation costs. This result is based on the fact that the cost to
10 move a given amount of mail on FedEx according to the terms of the agreement is,
11 on average, less than the cost to move an equivalent amount of mail on the current
12 dedicated networks. Therefore, in general, the agreement will be replacing more
13 expensive existing air transportation with less expensive FedEx air transportation.

14 Second, the agreement will tend to change the distribution of volume variable
15 costs among the classes and subclasses of mail. This result is driven by a number
16 of factors. One primary factor is that, for the day turn network, FedEx will be paid
17 based on the cubic feet of mail transported; thus, FedEx costs will be distributed to
18 the classes and subclasses of mail based on a cubic-foot distribution. Currently,
19 purchased air transportation costs are distributed based on a pound-mile
20 distribution. This change will redistribute the volume variable costs to classes and
21 subclasses of mail. Other factors that will affect the distribution of costs to classes
22 and subclasses include the fact that the Eagle and Western overnight network
23 premium costs will no longer exist once these networks are eliminated, and the fact

1 that the mix of mail tendered to FedEx may vary from the mix of mail tendered on
2 current purchased air transportation.

3 Third, the Postal Service will incur other, non-air transportation costs as a
4 result of entering into the FedEx transportation agreement. Specifically, in order to
5 load and unload the air transport containers that will fly on the day turn FedEx
6 network, the Postal Service will require additional, third-party ground handling
7 services at certain airports. The Postal Service has already entered into contractual
8 arrangements with various suppliers to provide these services. The costs for these
9 services represent additional costs associated with the FedEx transportation
10 agreement. Also, the FedEx transportation agreement will require additional
11 purchased highway transportation from certain cities into the FedEx hub in Memphis,
12 Tennessee. The purpose of this highway transportation is to truck mail that
13 originates near the FedEx hub into the hub, so that it can board outbound flights to
14 the various destinations in the network.

15 C. Need for Rollforward Adjustment

16 As stated above, the purpose of this testimony is to develop an adjustment
17 that is used in the rollforward process by witness Patelunas (USPS-T-12) to estimate
18 test year purchased transportation costs. The rollforward process requires an
19 adjustment because the FedEx transportation agreement represents a shift in
20 operations and cost structure. For example, if one were to take base year
21 purchased air transportation costs and project them into future years by applying
22 cost, volume, and other factors, the result would not be an accurate reflection of
23 future purchased air transportation costs with the FedEx networks in place.

1 Therefore, the results of the analysis described in this testimony are used to adjust
2 purchased transportation cost forecasts to reflect the impact of the FedEx
3 transportation agreement.

4 D. Overview of Methodology

5 The remainder of this testimony describes the methods used to estimate the
6 impact of the FedEx transportation agreement on purchased air transportation costs.
7 In general, the methodology involves four steps. The first step is to estimate
8 purchased air transportation costs for FY2002 and FY2003 in a scenario where I
9 assume that the FedEx transportation agreement does not exist, i.e., assuming that
10 the current dedicated air networks remain in place. In step two, I develop the
11 distribution keys for FedEx air transportation. Step three involves estimating
12 purchased air transportation costs in a scenario where the FedEx transportation
13 agreement is implemented as specified in the agreement and as planned by the
14 Postal Service. The fourth step uses the results from the previous steps to develop
15 the rollforward adjustments that are used by witness Patelunas. Each of these three
16 steps will be discussed in turn in the remaining sections of the testimony.

17 III. ESTIMATION OF TRANSPORTATION COSTS WITHOUT FEDEX

18 The first step in developing the rollforward adjustment is to estimate
19 purchased air transportation costs for FY2002 and FY2003, assuming that the
20 current dedicated networks remain in place and that the FedEx transportation
21 agreement does not exist. Without any additional adjustments, the rollforward
22 process will estimate future purchased transportation costs that reflect the

1 operational and cost structure that existed in the base year (FY2000), the *status quo*
2 scenario. A rollforward adjustment is needed to adjust purchased transportation
3 costs in the *status quo* scenario to reflect the costs that would result under the
4 FedEx transportation agreement. The purpose of step one of the methodology is to
5 estimate the *status quo* purchased transportation costs.

6 The remainder of this section of the testimony details the input data required
7 to estimate *status quo* costs, describes the method used to estimate costs for each
8 relevant cost pool, and finally presents the results of step one.

9 A. Input Data

10 In general, the input data required in estimating *status quo* purchased air
11 transportation costs is the same input data used in the rollforward process to
12 estimate the future purchased air transportation costs. The input data can be
13 grouped into the following categories: base year purchased transportation costs,
14 cost level factors, mail volume projections, and other air adjustments. Each of these
15 categories of input data will be discussed in turn:

16 1. Base Year Purchased Air Transportation Costs

17 Base year purchased transportation costs are taken from witness Meehan
18 (USPS-T-11). These include base year costs by class and subclass of mail for each
19 of the relevant cost pools. Relevant cost pools are defined as those that will be
20 affected by the FedEx transportation agreement. These include: Passenger Air,
21 DNET & HASP, Eagle overnight network, Western overnight network, and Air Taxi.

2. Cost Level Factors

Cost level factors are used in the rollforward process to adjust base year costs for projected changes in cost levels into the future. They are applied separately for each year that costs are projected, and the same cost level factor is applied uniformly across all classes and subclasses of mail for a particular year.

The cost level factors used as inputs into this step of the methodology are the same as those used by witness Patelunas (USPS-T-12) in the rollforward process.

3. Mail Volume Projections

In order to account for the impact of changes in mail volumes when estimating future costs, volume factors are applied in the rollforward process. These volume factors are applied separately for each year that costs are projected, and they are applied separately for each class and subclass of mail. The factors are expressed as the percentage change in mail volumes over one year for each class and subclass of mail.

The volume factors used as inputs into this step of the methodology are the same as those used by witness Patelunas (USPS-T-12) in the rollforward process.

4. Other Air Adjustments

In the same way that the adjustments for FedEx described in this testimony are used in the rollforward, other adjustments are also made in the rollforward. These can occur for a variety of reasons but are generally related to changes in operations that cannot be accounted for by the standard rollforward processes. Because this testimony deals only with changes to purchased transportation costs

1 that are a result of the FedEx transportation agreement, other rollforward
2 adjustments that are not related to or affected by the agreement are not included.

3 However, there is one adjustment made in the rollforward that is affected by
4 the FedEx transportation agreement and must therefore be accounted for in
5 estimating the cost impact of the FedEx agreement. This adjustment relates to the
6 purchased air transportation costs that will be incurred as a result of changes in the
7 Priority Mail Processing Center (PMPC) network. Early in this calendar year, the
8 Postal Service terminated its arrangement with Emery to outsource the processing
9 and transportation of Priority Mail in the Eastern United States. Because this
10 arrangement included air transportation, this change will have an impact on
11 purchased air transportation costs. This impact, the costs to provide an alternate
12 means of air transportation, is included in the rollforward as an adjustment in both
13 FY2001 and FY2002.

14 The impact of this adjustment in FY2002 will be affected by the FedEx
15 transportation agreement. This is due to the fact that FedEx capacity will eliminate
16 the need for the interim air transportation that had been substituted for the PMPC air
17 transportation. Therefore, in order to fully account for the impact of the FedEx
18 agreement, the rollforward adjustment for FedEx must take into account the
19 rollforward adjustment that had been made for the PMPC network in the *status quo*
20 scenario.

21 The PMPC rollforward adjustment used as an input into this step of the
22 methodology is the same as that used by witness Patelunas in the rollforward
23 process.

1 B. Method Used to Estimate Costs by Cost Pool

2 With the inputs described above, this step of the methodology produces
3 FY2001 - FY2003 purchased air transportation costs in the *status quo* scenario.
4 This process is completed separately for each of the relevant cost pools: Passenger
5 Air, DNET & HASP, Eagle overnight network, Western overnight network, Air Taxi,
6 and other adjustments. Although the rollforward does not make a distinction
7 between the cost pools that are included within the purchased air transportation
8 component, it is necessary to make such a distinction here because these cost pools
9 are affected differently by the FedEx transportation agreement (as is discussed in a
10 later section of this testimony).

11 In general, the method used to estimate *status quo* costs is similar across
12 cost pools. Beginning with base year costs by cost pool, the appropriate cost level
13 factor is applied, the appropriate volume factor is applied, and then any other
14 adjustments are applied. This process is repeated for FY2001, FY2002, and
15 FY2003 cost estimates. The following sections of this testimony describe any
16 differences in methodology between the cost pools.

17 1. DNET & HASP

18 Estimates for DNET & HASP costs follow the general methodology described
19 above. First, the cost level factor for changes between BY2000 and FY2001 is
20 applied to the volume variable costs for each class and subclass of mail and to the
21 non-volume variable costs. Second, a separate volume factor is applied for changes
22 in mail volume between BY2000 and FY2001 to the volume variable costs for each

1 class and subclass of mail. This same process is repeated for changes between
2 FY2001 - FY2002 and for changes between FY2002 - FY2003 (test year).

3 2. Eagle and Western Overnight Networks

4 Eagle and Western overnight network costs are estimated in exactly the same
5 manner. The method used for these cost pools is different than that used for DNET
6 & HASP because these networks exist to support a specific product, Express Mail.
7 First, the cost level factor and volume factor are applied to BY2000 Express Mail
8 volume variable costs to yield FY2001 Express Mail volume variable costs. Second,
9 the cost level factor is applied to BY2000 total volume variable costs to yield FY2001
10 total volume variable costs. Third, FY2001 Express Mail volume variable costs are
11 subtracted from FY2001 total volume variable costs to yield FY2001 non-Express
12 Mail volume variable costs. Fourth, the ratio of FY2001 non-Express Mail volume
13 variable costs to BY2000 non-Express Mail volume variable costs is calculated.
14 Fifth, this ratio is applied to the BY2000 costs for each class and subclass of mail
15 (other than Express Mail) to yield FY2001 volume variable costs by class and
16 subclass. Sixth, the cost level factor is applied to BY2000 non-volume variable costs
17 to yield FY2001 non-volume variable costs. This process is repeated for FY2002
18 and FY2003.

19 The net effect of this method is the following: total network costs change only
20 based on cost level changes, not volume; Express Mail costs change based on both
21 cost level and volume level changes. The rationale behind this method is that the
22 size of these dedicated networks is not affected by changes in mail volumes.
23 Rather, the networks are sized at some minimum efficient level to accommodate

Express Mail volumes. Therefore, as mail volumes increase, products other than Express Mail are pushed off of these networks and onto other air transportation. As described below, the volume growth for products other than Express Mail that are carried on the Eagle and the Western overnight networks is added to Passenger Air.

3. Air Taxi

Estimates for Air Taxi costs follow the same methodology used for DNET & HASP costs. First, the cost level factor for changes between BY2000 and FY2001 is applied to the volume variable costs for each class and subclass of mail. Second, a separate volume factor is applied for changes in mail volume between BY2000 and FY2001 to the volume variable costs for each class and subclass of mail. This same process is repeated for changes between FY2001 - FY2002 and for changes between FY2002 - FY2003 (test year).

4. Passenger Air

Cost estimates for Passenger Air are developed by first calculating the cost and volume changes from the base year and then adding in any mail volume spilled onto Passenger Air from the Eagle and Western overnight networks. Specifically, the cost level factor for changes between BY2000 and FY2001 is applied to the volume variable costs for each class and subclass of mail. Second, a separate volume factor is applied for changes in mail volume between BY2000 and FY2001 to the volume variable costs for each class and subclass of mail. Third, this same process is applied to the volume variable costs for the Eagle and Western overnight networks to estimate what Eagle and Western volume variable costs would have been if the standard rollforward process were applied. Fourth, the actual volume

1 variable costs by class and subclass of mail calculated for the Eagle and Western
2 networks (as described above) are subtracted from what these costs would have
3 been given the standard rollforward process. Fifth, this difference is added back to
4 Passenger Air by class and subclass to account for the mail volume spilled onto
5 Passenger Air due to volume growth on the Eagle and Western networks.

6 This same process is repeated for changes between FY2001 - FY2002 and
7 for changes between FY2002 - FY2003 (test year).

8 5. Other Adjustments

9 As described above, one element of input data used in estimating *status quo*
10 costs is the adjustment made in the rollforward to account the termination of the
11 PMPC network agreement with Emery. Specifically, the adjustment relates to the
12 costs of providing alternate means of air transportation for the Priority Mail that was
13 formerly transported as part of the PMPC network contract. For this step in the
14 methodology, the PMPC adjustment is treated in the same manner as it is in the
15 rollforward.

16 For FY2001, the adjustment value is applied entirely to Priority Mail. For
17 FY2002, the following calculations are performed. First, the cost level factor for
18 changes between FY2001 and FY2002 is applied to the FY2001 adjustment.
19 Second, to account for changes in Priority Mail volume between FY2001 and
20 FY2002, the volume factor is applied to the cost level-adjusted FY2001 costs. Third,
21 the FY2002 adjustment is added. This same process is followed for FY2003 with
22 the exception of the last step because there is no adjustment for FY2003.

C. Results

The following Tables, USPS-T-18A and USPS-T-18B, show the resulting *status quo* purchased air transportation costs for FY2002 and FY2003, respectively. Please note that the results contained in these tables do not include all purchased air transportation costs and do not include all adjustments to purchased air transportation costs made in the rollforward. These results include only the costs and adjustments that are affected by the FedEx transportation agreement.

Table USPS-T-18A: FY2002 Status Quo Costs (in thousands)

Mail Class	Passenger Air	Daynet & HASP	Eagle Network	Western Network	Air Taxi	Other Adjustments
FIRST-CLASS MAIL:						
SINGLE-PIECE LETTERS	193,233	75,531	8,968	634	18,495	0
PRESORT LETTERS	186,407	69,790	7,714	1,871	17,227	0
SINGLE-PIECE CARDS	5,225	1,813	95	19	464	0
PRESORT CARDS	1,799	713	61	17	168	0
TOTAL FIRST-CLASS	386,664	147,848	16,838	2,540	36,353	0
PRIORITY MAIL	303,601	101,675	25,276	5,753	30,551	292,373
EXPRESS MAIL	10,798	341	15,920	1,132	1,723	0
MAILGRAMS	0	0	0	0	0	0
PERIODICALS:						
IN-COUNTY	0	0	0	0	0	0
OUTSIDE COUNTY	14,629	5,926	276	102	1,541	0
TOTAL PERIODICALS	14,629	5,926	276	102	1,541	0
STANDARD MAIL:						
ENHANCED CARR RTE	245	94	11	5	72	0
REGULAR	18,927	5,752	722	285	1,978	0
TOTAL STANDARD	19,172	5,846	733	290	2,050	0
PACKAGE SERVICES:						
PARCEL POST	2,669	1,657	46	17	7,891	0
BOUND PRINTED MATTER	2,208	880	49	1	257	0
LIBRARY MAIL	1,153	485	55	2	119	0
PACKAGE SERVICES	6,029	3,022	151	20	8,267	0
US POSTAL SERVICE	1,162	341	619	5	154	0
FREE MAIL	876	331	45	0	80	0
INTERNATIONAL MAIL	23,612	7,208	5,734	553	2,375	0
TOTAL MAIL	766,543	272,537	65,590	10,394	83,095	292,373
OTHER	0	0	146,185	27,484	0	0
TOTAL	766,543	272,537	211,775	37,879	83,095	292,373

1

Table USPS-T-18B: FY2003 Status Quo Costs (in thousands)

Mail Class	Passenger Air	Daynet & HASP	Eagle Network	Western Network	Air Taxi	Other Adjustments
1 FIRST-CLASS MAIL:						
2 SINGLE-PIECE LETTERS	187,757	73,420	8,780	629	17,978	0
3 PRESORT LETTERS	196,726	73,402	7,553	1,855	18,118	0
4 SINGLE-PIECE CARDS	5,314	1,843	93	19	471	0
5 PRESORT CARDS	1,865	738	60	17	174	0
6 TOTAL FIRST-CLASS	391,662	149,402	16,485	2,519	36,741	0
7 PRIORITY MAIL	323,789	107,634	24,746	5,705	32,342	309,508
8 EXPRESS MAIL	11,481	362	16,927	1,204	1,832	0
9 MAILGRAMS	0	0	0	0	0	0
10 PERIODICALS:						
11 IN-COUNTY	0	0	0	0	0	0
12 OUTSIDE COUNTY	14,575	5,902	270	101	1,535	0
13 TOTAL PERIODICALS	14,575	5,902	270	101	1,535	0
14 STANDARD MAIL:						
15 ENHANCED CARR RTE	257	99	11	5	75	0
16 REGULAR	20,202	6,115	707	283	2,102	0
17 TOTAL STANDARD	20,459	6,213	718	287	2,177	0
18 PACKAGE SERVICES:						
19 PARCEL POST	2,861	1,772	45	17	8,441	0
20 BOUND PRINTED MATTER	2,268	903	48	1	264	0
21 LIBRARY MAIL	1,186	498	54	2	122	0
22 PACKAGE SERVICES	6,315	3,173	148	20	8,828	0
23 US POSTAL SERVICE	1,106	328	606	5	148	0
24 FREE MAIL	908	342	44	0	83	0
25 INTERNATIONAL MAIL	24,670	7,433	5,614	548	2,449	0
26 TOTAL MAIL	794,966	280,789	65,557	10,389	86,135	309,508
27 OTHER	0	0	146,112	27,471	0	0
28 TOTAL	794,966	280,789	211,669	37,860	86,135	309,508

IV. DEVELOPMENT OF FEDEX DISTRIBUTION KEYS

The second step in developing the FedEx rollforward adjustment is to calculate the distribution of FedEx costs to the classes and subclasses of mail for each component of FedEx transportation. As will be discussed in later sections of this testimony, the planned distribution of mail volume on FedEx transportation by ACT type is known.¹ Therefore, in order to determine costs by the classes and subclasses of mail, the distribution of mail by product within a given ACT type is needed. This section of the testimony describes how these distributions have been developed for the different elements of FedEx transportation (day turn and night turn). In addition, this section of the testimony also describes the development of Passenger Air cost distributions within ACT type. These distributions are required to calculate Passenger Air costs in the FedEx scenario as discussed in later sections of the testimony.

The remainder of this section of the testimony details the input data used to develop distribution keys, describes the methodology used to calculate the keys, and presents the results of this step of the methodology.

A. Input Data

All of the input data required to develop FedEx distribution keys comes from the Transportation Cost System (TRACS). Specifically, three elements of TRACS were used. As part of the development of the Passenger Air distribution key,

1 TRACS calculates the distribution of pound miles by class and subclass within ACT
2 type. The TRACS BY2000 Passenger Air distributions by ACT type and quarter were
3 used in developing FedEx distribution keys.

4 Similarly, TRACS also calculates the distribution of pound miles by class and
5 subclass within ACT type for the Eagle overnight network. These quarterly
6 distributions were also used in developing FedEx distribution keys.

7 Finally, the density of mail by class and subclass (expressed in terms of
8 pounds per cubic foot) was needed to convert pound-based distributions to cubic
9 foot-based distributions in certain instances. Mail densities were also taken from
10 TRACS.

11 B. Method Used to Develop Distribution Keys

12 Three distribution keys were developed for FedEx transportation: day turn
13 Priority, day turn First-Class, and night turn express.² The day turn Priority
14 distribution key was developed as follows. First, the Passenger Air and Eagle
15 distributions for the Priority ACT type were converted to cubic foot-based
16 distributions. This involved dividing the pound-based distribution for each class and
17 subclass of mail by the mail density and then scaling the distributions so that they
18 totalled 100 percent. Second, the Passenger Air and Eagle cubic foot-based
19 distributions were weighted together to form an aggregate Priority ACT type key

¹ Air class tag (ACT) type refers to the designation given to mail containers that are scanned to air transportation. These designations associate general product classes with each container. For example, an "E" ACT type generally refers to express products that require expedited transportation. For the purposes of this proceeding, ACTs are synonymous with distribution and routing (D&R) tags.

1 using the relative proportions of pound miles for Passenger Air and Eagle Priority
2 ACT types. Finally, the aggregate distributions were weighted together across
3 quarters to form the annual FedEx day turn Priority ACT type distribution. The day
4 turn First-Class distribution key was developed in the exact same manner.

5 The night turn express distribution was developed using a similar
6 methodology with one exception. Night turn network costs are distributed on a
7 pound-based distribution key. Therefore, the TRACS distributions by ACT type were
8 not converted to cubic foot-based distributions. Instead, the TRACS distributions
9 within the express ACT type were weighted across Passenger Air and Eagle, and
10 across quarter. This resulted in the night turn express distribution key.

11 As mentioned above, the distribution of Passenger Air costs within ACT type
12 was also required to calculate costs in the FedEx scenario. In order to calculate
13 these distributions, the TRACS Passenger Air distributions by ACT type were
14 weighted across quarters based on the total Passenger Air costs by quarter.

15 C. Results

16 The following Tables, USPS-T-18C and USPS-T-18D, show the resulting
17 distribution keys for FedEx and Passenger Air, respectively.

² These distribution keys refer to the distribution of mail within ACT type. For example, the "night turn express" key provides the distribution of mail within express ACT types and does not refer to the Express Mail class. As the key shows, containers assigned the express ACT type may include mail from other classes.

1

Table USPS-T-18C: FedEx Distribution Keys

Mail Class	Daytime Priority	Daytime First Class	Nighttime Express
1 FIRST-CLASS MAIL:			
2 SINGLE-PIECE LETTERS	0.0111	0.4451	0.0147
3 PRESORT LETTERS	0.0054	0.3596	0.0013
4 SINGLE-PIECE CARDS	0.0000	0.0128	0.0002
5 PRESORT CARDS	0.0000	0.0043	0.0000
6 TOTAL FIRST-CLASS	0.0166	0.8218	0.0163
7 PRIORITY MAIL	0.9609	0.0600	0.0132
8 EXPRESS MAIL	0.0002	0.0005	0.8409
9 MAILGRAMS	0.0000	0.0000	0.0000
10 PERIODICALS:			
11 IN-COUNTY	0.0000	0.0000	0.0000
12 OUTSIDE COUNTY	0.0004	0.0265	0.0030
13 TOTAL PERIODICALS	0.0004	0.0265	0.0030
14 STANDARD MAIL:			
15 ENHANCED CARR RTE	0.0002	0.0003	0.0000
16 REGULAR	0.0007	0.0339	0.0024
17 TOTAL STANDARD	0.0009	0.0342	0.0024
18 PACKAGE SERVICES:			
19 PARCEL POST	0.0008	0.0096	0.0008
20 BOUND PRINTED MATTER	0.0000	0.0049	0.0000
21 MEDIA MAIL	0.0004	0.0043	0.0004
22 PACKAGE SERVICES	0.0012	0.0189	0.0013
23 US POSTAL SERVICE	0.0013	0.0026	0.0044
24 FREE MAIL	0.0014	0.0019	0.0000
25 INTERNATIONAL MAIL	0.0170	0.0335	0.1186
26 TOTAL MAIL	1.0000	1.0000	1.0000

1

Table USPS-T-18C: Passenger Air Distribution Keys

Mail Class	First Class	Priority	Express	International	Other
1 FIRST-CLASS MAIL:					
2 SINGLE-PIECE LETTERS	0.4522	0.0139	0.0036	0.0000	0.1845
3 PRESORT LETTERS	0.3616	0.0058	0.0007	0.0000	0.3482
4 SINGLE-PIECE CARDS	0.0120	0.0000	0.0006	0.0156	0.0009
5 PRESORT CARDS	0.0040	0.0000	0.0000	0.0000	0.0007
6 TOTAL FIRST-CLASS	0.8297	0.0198	0.0049	0.0156	0.5342
7 PRIORITY MAIL	0.0524	0.9643	0.0182	0.0000	0.4634
8 EXPRESS MAIL	0.0003	0.0000	0.9120	0.0000	0.0009
9 MAILGRAMS	0.0000	0.0000	0.0000	0.0000	0.0000
10 PERIODICALS:					
11 IN-COUNTY	0.0000	0.0000	0.0000	0.0000	0.0000
12 OUTSIDE COUNTY	0.0344	0.0007	0.0062	0.0000	0.0000
13 TOTAL PERIODICALS	0.0344	0.0007	0.0062	0.0000	0.0000
14 STANDARD MAIL:					
15 ENHANCED CARR RTE	0.0004	0.0003	0.0000	0.0000	0.0000
16 REGULAR	0.0409	0.0007	0.0056	0.0084	0.0011
17 TOTAL STANDARD	0.0413	0.0010	0.0056	0.0084	0.0011
18 PACKAGE SERVICES:					
19 PARCEL POST	0.0049	0.0005	0.0001	0.0000	0.0000
20 BOUND PRINTED MATTER	0.0050	0.0000	0.0001	0.0000	0.0000
21 MEDIA MAIL	0.0034	0.0004	0.0000	0.0000	0.0000
22 PACKAGE SERVICES	0.0132	0.0009	0.0002	0.0000	0.0000
23 US POSTAL SERVICE	0.0026	0.0001	0.0000	0.0000	0.0000
24 FREE MAIL	0.0013	0.0013	0.0000	0.0000	0.0000
25 INTERNATIONAL MAIL	0.0248	0.0119	0.0530	0.9760	0.0003
26 TOTAL MAIL	1.0000	1.0000	1.0000	1.0000	1.0000

1 V. ESTIMATION OF TRANSPORTATION COSTS WITH FEDEX

2 The third step in developing the rollforward adjustment is to estimate
3 purchased air transportation costs for FY2002 and FY2003 under a scenario where
4 the FedEx transportation agreement is implemented according to the terms of the
5 agreement and the USPS implementation plans. As stated earlier, the results of this
6 step of the process will be compared to the *status quo* scenario in order to develop
7 the rollforward adjustment.

8 The remainder of this section of the testimony details the input data used to
9 estimate costs under the FedEx scenario, describes the methodology for estimating
10 each of the FedEx cost elements, and presents the results of this step of the
11 methodology.

12 A. Input Data

13 A variety of input data were required in estimating purchased transportation
14 costs under the FedEx scenario. These data come from two primary sources: the
15 FedEx transportation agreement and USPS operational planning and
16 implementation data. Each of the inputs used in this step of the methodology will be
17 detailed below.

18 1. FedEx Prices

19 The prices that the Postal Service will pay to FedEx are specified in the
20 transportation agreement and are an important input into the estimation of FedEx
21 costs. These costs are specified separately for both the day turn and night turn

1 networks. There are three day turn network prices: fuel, non-fuel, and package
2 handling. Both the fuel and non-fuel prices are applied on a cubic-foot basis for
3 each cubic-foot of mail transported on the day turn network. The package handling
4 price is applied on a handling unit basis for each handling unit processed by FedEx
5 on the day turn network.

6 A handling unit can refer to different items tendered to FedEx depending on
7 the operational situation.³ Specifically, the definition of handling unit varies
8 depending on whether mail is loaded in bypass or non-bypass containers. A bypass
9 container is an air transport container (or unit load device – ULD) that contains only
10 mail that is bound for a single destination airstop.⁴ Although bypass ULDs may be
11 transported to the FedEx sorting hub in Memphis, their contents do not need any
12 sorting and the entire container will be loaded on the outbound aircraft from the hub
13 intact. Each bypass ULD is considered one handling unit.

14 Non-bypass ULDs are those that contain mail bound for multiple destination
15 airstops. The mail in non-bypass ULDs must be transported to the FedEx hub in
16 Memphis and sorted to the various destinations before the mail is packed into ULDs
17 and loaded on outbound aircraft. For mail in non-bypass ULDs, each item within the
18 ULD is considered a handling unit. The contents of ULDs will generally consist of
19 USPS sacks, trays, and large parcels. Therefore, each of these items within a non-
20 bypass ULD will receive a handling unit charge.

³ "Handling Unit" means a ULD (other than a partial ULD), Mailbag, Tub, Mail Tray, or Outside that is individually processed by FedEx. The term 'Handling Unit' does not include the contents of a By-pass ULD." (USPS LR-J-97 at 8)

⁴ "By-pass ULDs" means a single ULD loaded at the origin location for a particular destination. The volume in the ULD will not be individually processed in the FedEx sort operation. USPS sometimes refers to By-pass ULDs as 'intacts'. (USPS LR-J-97 at 5)

1 There are only two prices for the night turn network: fuel and non-fuel. Both
2 of these prices are applied on a pound basis for each pound of mail that is
3 transported on the night turn network.

4 2. FedEx Price Escalation Factors

5 All of the prices described above, with the exception of the day and night turn
6 network fuel prices, will increase at the same rate for each year of the agreement.
7 This escalation factor is specified in the agreement and is used as an input to this
8 step of the methodology.

9 Fuel prices for both the day and night turn networks will be adjusted
10 periodically based on the Producer Price Index for Jet Fuel as published by the
11 Bureau of Labor Statistics. In order to estimate the payments to FedEx for fuel
12 under the agreement, two different inputs were required. The first input was the PPI
13 base used to adjust fuel prices. This base is specified in the transportation
14 agreement and is the same for both the day and night turn networks. The second
15 input required was a forecast of the PPI for Jet Fuels. This forecast was taken from
16 USPS LR-J-50, Rollforward Expense Factors.

17 3. FedEx Volumes

18 The amount of capacity that the Postal Service will purchase from FedEx on
19 the day and night turn networks for FY2002 and FY2003 was required to estimate
20 FedEx transportation costs. For FY2002, these inputs were provided by USPS
21 Network Operations Management and are based on the current implementation
22 plans that are being developed jointly by the Postal Service and FedEx for the initial
23 months of the agreement. Although the transportation agreement specifies

1 minimum volumes on both the day and night turn networks, the Postal Service
2 currently plans to purchase volumes in excess of these minimums.

3 4. FedEx Volume Growth Rates

4 To estimate FedEx volumes for FY2003, a separate growth rate was applied
5 to the FY2002 volumes for both the day and night turn networks. The transportation
6 agreement specifies growth rates for the minimum volumes on both the day and
7 night turn networks. These growth rates were used to estimate FY2003 FedEx
8 volumes.

9 5. Product Mix on FedEx

10 The mix of Postal Service products that will be transported on the FedEx
11 network was required to estimate FedEx transportation costs by class and subclass
12 of mail. Two inputs were used to determine the allocation of FedEx costs to
13 products: the mix of mail by Air Class Tag (ACT) and the FedEx distribution keys
14 described in step two of the methodology. USPS Network Operations Management
15 provided the mix of mail by ACT type. The day turn network will transport a
16 combination of both First-Class and Priority ACT types. The night turn network will
17 transport only express ACT types.

18 6. Product Densities

19 The FedEx day turn volumes described above are specified in terms of cubic
20 feet. As will be discussed below, it was necessary to estimate the total number of
21 pounds on FedEx in order to calculate how much mail will move on Passenger Air in
22 FY2002 and FY2003. Therefore, the density of the mail that will travel on the FedEx

1 day turn network was required. Specifically, a separate density for the mail in First-
2 Class and Priority ACT types was used. These densities were provided by USPS
3 Network Operations Management and are based on the densities currently being
4 used to plan the network.

5 7. Excise Taxes

6 Implementation of the FedEx agreement will have implications on USPS
7 federal excise tax payments. In the *status quo* scenario, excise taxes paid by the
8 Postal Service for air transportation are included in each of the cost pools.
9 Therefore, estimation of FedEx transportation costs must also account for excise
10 taxes that will be paid by the Postal Service as a result of the agreement with FedEx.
11 Excise tax payments are determined by applying the excise tax rate to the portion of
12 air transportation expense that is incurred for fuel and line haul transportation
13 (terminal handling expenses are not subject to excise tax).

14 In order to estimate excise tax payments under the FedEx scenario, two
15 inputs were required: the excise tax rate and the percentage of FedEx non-fuel
16 charges that are line haul. The Internal Revenue Service determines the excise tax
17 rate. FedEx has provided the Postal Service the percentage of their non-fuel
18 charges that are line haul.

19 8. Percentage of Cubic Feet in Bypass Containers

20 As described above, FedEx will charge a package handling rate to each
21 handling unit that is processed on the day turn network. Also as described above, a
22 handling unit can be an entire ULD in the case of bypass ULDs or it can be an item
23 within a ULD in the case of non-bypass ULDs. In order to calculate the total

1 package handling costs, an estimate of the percentage of volume in bypass vs. non-
2 bypass containers was required. This estimate was taken from witness Spatola
3 (USPS-T-20).

4 9. Third Party Ground Handling Costs

5 As discussed by witness Spatola, the Postal Service has engaged third-party
6 ground handling services to load and unload FedEx air containers at the majority of
7 airstops on the day turn network. The cost for these ground handlers is included in
8 the rollforward adjustment. FY2002 projected costs for ground handling associated
9 with the FedEx day turn network were taken from the actual ground handling
10 contract awards.

11 10. Additional Highway Costs

12 It is anticipated that implementation of the FedEx network will require
13 additional highway transportation above and beyond the highway transportation
14 used in the base year. The costs for this additional highway transportation have
15 been included in the rollforward adjustment. USPS Network Operations
16 Management has developed an estimate of the cost of this highway transportation
17 as part of their implementation planning. This figure has been used for the FY2002
18 additional highway transportation cost associated with FedEx.

19 B. Method Used to Estimate Costs

20 Five separate elements of purchased transportation costs have been
21 estimated for the FedEx scenario: day turn network, night turn network, passenger
22 air, ground handling, and highway. Using the inputs described above, the costs for

1 each of these elements has been estimated by class and subclass of mail. The
2 remainder of this section will describe the methods used to estimate each element of
3 cost in turn.

4 1. Day Turn Network

5 FY2002 day turn network costs were estimated using the following approach.
6 First, the average cost per cubic foot for all day turn volume was calculated. This
7 cost is composed of four different elements. The first element is the non-fuel cost
8 per cubic foot. This cost was taken directly from the transportation agreement as
9 described above. The second element is the fuel cost per cubic foot. This cost was
10 calculated by taking the base fuel cost per cubic foot and multiplying it by the ratio of
11 the FY2002 forecasted Jet Fuel PPI to the base PPI.⁵ The third element is the
12 package handling cost per cubic foot. As described above, the Postal Service will
13 actually pay for FedEx package handling fees on a handling unit basis. To convert
14 the cost per handling unit to an average cost per cubic foot, the following
15 calculations were used. The package handling cost per cubic foot for non-bypass
16 volume was determined by dividing the cost per handling unit by the average cubic
17 feet per mixed handling unit.⁶ The package handling cost per cubic foot for bypass
18 volume was determined by dividing the cost per handling unit by the average cubic

⁵ The formula used to calculate the day turn fuel cost per cubic foot is specified in the FedEx transportation agreement (USPS LR-J-97 Exhibit B, paragraph A.2.).

⁶ The average cubic feet per mixed handling unit was obtained from the FedEx transportation agreement (USPS LR-J-97, Exhibit B, paragraph A.3.). The agreement includes estimates of the average number of handling units by container type. These estimates were divided by the cubic foot capacity of each container type to arrive at the average cubic feet per handling unit.

1 feet per direct container.⁷ These two costs were then weighted together using the
2 percentage mix of bypass and non-bypass volume. Finally, the fourth element of
3 day turn network costs is the excise tax per cubic foot. This cost was calculated by
4 determining the cost per cubic foot that is subject to excise tax and then applying the
5 excise tax rate. The costs that are subject to excise tax are the fuel cost per cubic
6 foot plus the portion of non-fuel costs that are line haul (non-fuel cost per cubic foot
7 multiplied by the percentage of non-fuel costs that are line haul). When added
8 together, these four elements yield the average cost per cubic foot for all volume that
9 will be transported on the day turn network.

10 Second, the total FedEx day turn costs for volume in First-Class and Priority
11 ACT types was calculated. This was accomplished by multiplying the FY2002 total
12 FedEx day turn volume by the percentage of volume in First-Class and Priority ACT
13 types to yield FY2002 FedEx cubic feet in First-Class and Priority ACT types. Then,
14 these volumes were multiplied by the average cost per cubic foot for the day turn
15 network to yield the costs for volume in First-Class ACTs and Priority ACTs.

16 Third, the cost for volume in First-Class ACTs and Priority ACTs was
17 distributed to the classes and subclasses of mail. This was accomplished by
18 multiplying the costs by the FedEx day turn First-Class and Priority distribution keys.

19 This process was repeated for FY2003 using the same methodology after
20 adjusting the costs per cubic foot and volumes for changes between FY2002 and
21 FY2003.

⁷ The average cubic feet per direct container is an average of the different capacities for the containers that will be used to carry mail. These containers include: AMJs (590 cubic feet), Demis (202 cubic feet), and LD3s (153 cubic feet). The average cubic feet per direct container depends on

2. Night Turn Network

FY2002 night turn network costs were estimated using an approach similar to the day turn. First, the average cost per pound for all volume on the night turn network was calculated. This cost is composed of three elements. The first element is the non-fuel cost per pound, which was taken directly from the transportation agreement. The second element is the fuel cost per pound. This cost was calculated by taking the base fuel cost per pound and multiplying it by the ratio of the FY2002 forecasted Jet Fuel PPI to the base PPI.⁸ The third element of night turn network costs is the excise tax per pound. This cost was calculated by determining the cost per pound that is subject to excise tax and then applying the excise tax rate. The costs that are subject to excise tax are the fuel costs plus the portion of non-fuel costs that are line haul (non-fuel cost per pound multiplied by the percentage of non-fuel costs that are line haul). When added together, these three elements yield the average cost per pound for all volume that will be transported on the night turn network.

Second, the total FedEx night turn costs for volume in express ACTs was calculated. This was accomplished by multiplying the FY2002 total FedEx night turn volume by the average cost per pound for the night turn network.

Third, the cost for volume in express ACTs was distributed to the classes and subclasses of mail. This was accomplished by multiplying the total costs by the FedEx night turn express distribution key.

the actual mix of direct containers tendered to FedEx. USPS Network Operations Management provided the figure of 250 cubic feet.

⁸ The formula used to calculate the night turn fuel cost per pound is specified in the FedEx transportation agreement (USPS LR-J-97, Exhibit B, paragraph B.2.).

1 This process was repeated for FY2003 using the same methodology after
2 adjusting the costs per pound and volumes for changes between FY2002 and
3 FY2003.

4 3. Passenger Air

5 The FedEx transportation agreement will impact the costs of purchased
6 Passenger Air transportation. As stated earlier, implementation of the FedEx
7 agreement involves eliminating existing dedicated air transportation. In general,
8 under the FedEx scenario there will only be two types of air transportation: FedEx
9 and Passenger Air. To the extent that the amount and type of volume transported
10 on FedEx is not identical to the volume that is currently transported on the dedicated
11 capacity that will be eliminated, the amount and type of volume that will be carried
12 on Passenger Air will change. Therefore, as part of the rollforward adjustment, the
13 impact of the FedEx transportation agreement on Passenger Air costs must be
14 estimated. Within this step of the methodology, the costs for Passenger Air under
15 the FedEx scenario have been estimated.

16 Passenger Air costs were estimated as follows. First, total FedEx volume by
17 ACT type in pounds was calculated. For the night turn network, the total pounds for
18 express ACT types were taken directly from the night turn cost calculations
19 described above for FY2002 and FY2003. For the day turn network, the total cubic
20 feet in First-Class and Priority ACT types were converted to pounds using the
21 appropriate density factors.

22 Second, these FedEx volumes by ACT type were subtracted from the
23 estimated total air pounds by ACT type for both FY2002 and FY2003. Total air

1 pounds by ACT type for the base year were calculated using three sources. Total
2 base year passenger air pounds are from USPS LR-J-29. These pounds are added
3 to total dedicated network air pounds from USPS LR-J-95. Finally, Christmas
4 network (CNET) pounds from USPS LR-J-36 are subtracted from this total to arrive
5 at total base year (non-CNET) air pounds by ACT type.⁹ These base year volumes
6 were projected to FY2002 and FY2003 using the same volume growth factors by
7 class and subclass of mail that were used in estimating costs under the *status quo*
8 scenario.

9 Third, the remaining air pounds that will not be transported on FedEx were
10 multiplied by the average Passenger Air cost per pound for FY2002 and FY2003 to
11 yield total Passenger Air costs by ACT type. The base year Passenger Air average
12 cost per pound was projected to FY2002 and FY2003 using the same cost level
13 factors that were used in estimating costs under the *status quo* scenario.

14 Fourth, the total Passenger Air costs by ACT type were distributed to the
15 classes and subclasses of mail. These distributions were made using the base year
16 Passenger Air distributions by ACT type developed in step 2 of the methodology.

17 4. Ground Handling

18 Third-party ground handling costs associated with the FedEx day turn
19 network were calculated as follows. First, FY2002 ground handling costs were taken
20 from the ground handling contracts and distributed to the classes and subclasses of
21 mail using the same distribution that was used for FedEx day turn transportation

⁹ CNET pounds are subtracted from total base year air pounds because the FedEx transportation agreement is not expected to affect CNET costs. Therefore, this analysis does not project any volume shifts from CNET to either FedEx or Passenger Air.

1 costs. Second, the FY2002 total ground handling costs were projected to FY2003
2 by applying the cost level factor and a volume growth factor. The cost level factor
3 was the same FY2002 to FY2003 factor that was used to estimate costs in the
4 *status quo* scenario. The volume growth factor was the FedEx day turn volume
5 growth specified in the FedEx transportation agreement. Third, FY2003 total ground
6 handling costs were distributed to the classes and subclasses of mail using the
7 same distribution that was used for FedEx day turn transportation costs.

8 5. Highway Costs

9 The last element of cost under the FedEx scenario was the additional
10 highway transportation costs that will be required as a result of the FedEx
11 transportation agreement. As described above, USPS Network Operations
12 Management estimated the amount of cost for additional highway in FY2002. This
13 amount was distributed to the classes and subclasses of mail using the same
14 distribution key that was used for FedEx day turn transportation costs. The FY2002
15 total additional highway costs were projected to FY2003 by applying the cost level
16 factor. The cost level factor was the same FY2002 to FY2003 factor that was used
17 to estimate costs in the *status quo* scenario. Finally, the FY2003 total additional
18 highway costs were distributed to the classes and subclasses of mail using the same
19 distribution that was used for FedEx day turn transportation costs.

20 C. Results

21 The following Tables, USPS-T-18E and USPS-T-18F, show the resulting
22 costs for FY2002 and FY2003 respectively for each cost element under the FedEx

1 scenario. Please note that the results contained in these tables do not include all
2 purchased air transportation costs and do not include all adjustments to purchased
3 air transportation costs made in the rollforward. These results include only the costs
4 and adjustments that are affected by the FedEx transportation agreement.

1

Table USPS-T-18E: FY2002 FedEx Scenario Costs (in thousands)

Mail Class	Passenger Air	FedEx Day Turn	FedEx Night Turn	Ground Handling	Additional Highway
1 FIRST-CLASS MAIL:					
2 SINGLE-PIECE LETTERS	194,226	67,629	1,664	5,335	294
3 PRESORT LETTERS	163,724	52,678	148	4,156	229
4 SINGLE-PIECE CARDS	5,007	1,794	28	142	8
5 PRESORT CARDS	1,632	607	2	48	3
6 TOTAL FIRST-CLASS	364,589	122,709	1,841	9,680	533
7 PRIORITY MAIL	283,565	539,373	1,498	42,551	2,342
8 EXPRESS MAIL	15,054	201	95,210	16	1
9 MAILGRAMS	0	0	0	0	0
10 PERIODICALS:					
11 IN-COUNTY	0	0	0	0	0
12 OUTSIDE COUNTY	14,092	3,890	335	307	17
13 TOTAL PERIODICALS	14,092	3,890	335	307	17
14 STANDARD MAIL:					
15 ENHANCED CARR RTE	230	143	1	11	1
16 REGULAR	16,853	5,086	270	401	22
17 TOTAL STANDARD	17,083	5,229	271	413	23
18 PACKAGE SERVICES:					
19 PARCEL POST	2,089	1,795	95	142	8
20 BOUND PRINTED MATTER	2,014	688	4	54	3
21 LIBRARY MAIL	1,445	815	47	64	4
22 PACKAGE SERVICES	5,548	3,298	145	260	14
23 US POSTAL SERVICE	1,061	1,080	499	85	5
24 FREE MAIL	833	1,011	0	80	4
25 INTERNATIONAL MAIL	22,188	14,054	13,426	1,109	61
26 TOTAL MAIL	724,012	690,845	113,225	54,500	3,000
27 OTHER	0	0	0	0	0
28 TOTAL	724,012	690,845	113,225	54,500	3,000

1

Exhibit USPS-T-18F: FY2003 FedEx Scenario Costs (In thousands)

Mail Class	Passenger Air	FedEx Day Turn	FedEx Night Turn	Ground Handling	Additional Highway
1 FIRST-CLASS MAIL:					
2 SINGLE-PIECE LETTERS	194,915	72,187	1,753	5,599	294
3 PRESORT LETTERS	164,578	56,228	156	4,361	229
4 SINGLE-PIECE CARDS	5,017	1,915	29	149	8
5 PRESORT CARDS	1,635	648	2	50	3
6 TOTAL FIRST-CLASS	366,145	130,978	1,940	10,159	533
7 PRIORITY MAIL	299,876	575,720	1,578	44,656	2,341
8 EXPRESS MAIL	16,684	215	100,319	17	1
9 MAILGRAMS	0	0	0	0	0
10 PERIODICALS:					
11 IN-COUNTY	0	0	0	0	0
12 OUTSIDE COUNTY	14,121	4,152	353	322	17
13 TOTAL PERIODICALS	14,121	4,152	353	322	17
14 STANDARD MAIL:					
15 ENHANCED CARR RTE	234	153	1	12	1
16 REGULAR	16,889	5,429	285	421	22
17 TOTAL STANDARD	17,123	5,582	285	433	23
18 PACKAGE SERVICES:					
19 PARCEL POST	2,099	1,916	100	149	8
20 BOUND PRINTED MATTER	2,015	734	4	57	3
21 LIBRARY MAIL	1,452	870	50	68	4
22 PACKAGE SERVICES	5,566	3,520	153	273	14
23 US POSTAL SERVICE	1,063	1,153	525	89	5
24 FREE MAIL	853	1,079	0	84	4
25 INTERNATIONAL MAIL	22,741	15,002	14,146	1,164	61
26 TOTAL MAIL	744,171	737,400	119,300	57,196	2,999
27 OTHER	0	0	0	0	0
28 TOTAL	744,171	737,400	119,300	57,196	2,999

1 VI. DEVELOPMENT OF ROLLFORWARD ADJUSTMENTS

2 The final step in developing the FedEx rollforward adjustment is to compare
3 the *status quo* scenario with the FedEx scenario in order to determine the net impact
4 of the FedEx transportation agreement. The FedEx rollforward adjustment consists
5 of three separate cost elements: air transportation, ground handling, and highway
6 transportation. The remainder of this section of the testimony: 1) explains the basic
7 processes that are used in the rollforward to apply the FedEx adjustment, 2)
8 describes the calculations used to develop the rollforward adjustment, and 3)
9 presents the rollforward adjustments.

10 A. Rollforward Mechanics

11 As described above with respect to the development of *status quo* costs, the
12 standard rollforward process consists of cost level adjustments, mail volume
13 adjustments, and other adjustments. These adjustments are applied sequentially for
14 a single year and the process is repeated for each successive year. Therefore, the
15 FedEx adjustment that is applied in FY2002 will receive cost level and volume
16 adjustments as it is projected to FY2003. This is an important point because it
17 means that the method for developing the FY2002 FedEx adjustment must be
18 different from the method for the FY2003 adjustment.

19 The FY2002 rollforward adjustment measures the cost impact of the FedEx
20 transportation agreement on FY2002 costs under the *status quo* scenario. In other
21 words, the adjustment modifies FY2002 *status quo* costs to match FY2002 costs in
22 the FedEx scenario. The FY2003 adjustment measures the cost impact of the

1 FedEx transportation agreement on FY2003 costs, where FY2003 costs already
2 incorporate the FY2002 FedEx adjustment. Therefore, the FY2003 adjustment is
3 the incremental effect of FedEx on FY2003 costs, which already reflect
4 implementation of the transportation agreement in FY2002.

5 The sections below detail the calculations used to produce the adjustments
6 for each cost element.

7 B. Calculating Rollforward Adjustments

8 The three cost elements of the FedEx rollforward adjustment are air
9 transportation, ground handling, and highway transportation. For FY2002, air
10 transportation adjustments are measured as the differential between the *status quo*
11 and the FedEx scenarios. Because ground handling and highway transportation are
12 purely additive (i.e., they do not offset any *status quo* costs), the FY2002
13 adjustments are simply the cost estimates from the FedEx scenario.

14 As described above, the FY2003 adjustments for all cost elements are
15 calculated by measuring the incremental impact between FY2002 and FY2003 of
16 FedEx, assuming that the FY2002 adjustment has already been incorporated.

17 1. Air Transportation

18 To calculate the air transportation adjustment, the following approach was
19 used. First, all FY2002 costs from the *status quo* scenario are added together to
20 yield the total FY2002 *status quo* air transportation costs. Second, FY2002 costs
21 from three elements of the FedEx scenario are added together: day turn, night turn,
22 and passenger air to yield total FY2002 FedEx air transportation costs. Third, the

1 FY2002 *status quo* costs are subtracted from the FY2002 FedEx costs to yield the
2 net impact of FedEx on purchased air transportation in FY2002.

3 For the FY2003 adjustment, the exact same process as described above is
4 used to calculate the net impact of FedEx on purchased air transportation in
5 FY2003. Next, the FY2002 adjustment is projected to FY2003 by applying the cost
6 level factor and volume factors (similar to the process used in development of *status*
7 *quo* costs). The last step is to subtract the projected FY2002 adjustment from the
8 FY2003 net impact. This yields the incremental impact of FedEx in FY2003 after the
9 FY2002 adjustment has been incorporated. The result is the FY2003 rollforward
10 adjustment for purchased air transportation.

11 2. Ground Handling

12 The FY2002 adjustment for ground handling is simply the FY2002 ground
13 handling costs from the FedEx scenario. To calculate the FY2003 adjustment for
14 ground handling, the FY2002 adjustment was projected to FY2003 by applying the
15 cost level factor and volume factors. The projected FY2002 adjustment is
16 subtracted from the FY2003 ground handling costs from the FedEx scenario to yield
17 the incremental impact of FedEx on ground handling costs after the FY2002
18 adjustment has been incorporated. This result is the FY2003 rollforward adjustment
19 for ground handling costs.

20 3. Highway Transportation

21 The method used to develop the highway transportation component of the
22 FedEx rollforward adjustment is identical to that used for ground handling. The
23 FY2002 highway transportation adjustment is simply the FY2002 highway costs from

1 the FedEx scenario. The FY2002 adjustment is then projected to FY2003 by
2 applying the cost level factor and volume factors. Next, the projected FY2002
3 adjustment is subtracted from the FY2003 highway costs from the FedEx scenario to
4 yield the incremental impact of FedEx on highway costs after the FY2002
5 adjustment has been incorporated. This result is the FY2002 rollforward adjustment
6 for additional highway costs due to the FedEx transportation agreement.

7 C. Results

8 *The following Tables, USPS-T-18G and USPS-T-18H, show the resulting*
9 *rollforward adjustments for FY2002 and FY2003, respectively, for each cost*
10 *element. Witness Patelunas (USPS-T-12) uses these results in developing the*
11 *rollforward. Please note that the results contained in these tables reflect the impact*
12 *of the FedEx transportation agreement only and do not incorporate other*
13 *adjustments made in the rollforward.*

1 **Table USPS-T-18G: FY2002 FedEx Rollforward Adjustment (in thousands)**

Mail Class	Air Transportation	Ground Handling	Additional Highway
1 FIRST-CLASS MAIL:			
2 SINGLE-PIECE LETTERS	-33,341	5,335	294
3 PRESORT LETTERS	-66,459	4,156	229
4 SINGLE-PIECE CARDS	-786	142	8
5 PRESORT CARDS	-517	48	3
6 TOTAL FIRST-CLASS	-101,104	9,680	533
7 PRIORITY MAIL	65,207	42,551	2,342
8 EXPRESS MAIL	80,551	16	1
9 MAILGRAMS	0	0	0
10 PERIODICALS:			
11 IN-COUNTY	0	0	0
12 OUTSIDE COUNTY	-4,156	307	17
13 TOTAL PERIODICALS	-4,156	307	17
14 STANDARD MAIL:			
15 ENHANCED CARR RTE	-54	11	1
16 REGULAR	-5,454	401	22
17 TOTAL STANDARD	-5,508	413	23
18 PACKAGE SERVICES:			
19 PARCEL POST	-8,301	142	8
20 BOUND PRINTED MATTER	-690	54	3
21 MEDIA MAIL	493	64	4
22 PACKAGE SERVICES	-8,498	260	14
23 US POSTAL SERVICE	358	85	5
24 FREE MAIL	513	80	4
25 INTERNATIONAL MAIL	10,187	1,109	61
26 TOTAL MAIL	37,550	54,500	3,000
27 OTHER	-173,670	0	0
28 TOTAL	-136,120	54,500	3,000

1

Table USPS-T-18H: FY2003 FedEx Rollforward Adjustment (in thousands)

Mail Class	Air Transportation	Ground Handling	Additional Highway
FIRST-CLASS MAIL:			
SINGLE-PIECE LETTERS	12,700	413	8
PRESORT LETTERS	-6,794	-9	-12
SINGLE-PIECE CARDS	22	5	0
PRESORT CARDS	-34	1	0
TOTAL FIRST-CLASS	5,894	409	-4
PRIORITY MAIL	4,422	-388	-138
EXPRESS MAIL	-239	0	0
MAILGRAMS	0	0	0
PERIODICALS:			
IN-COUNTY	0	0	0
OUTSIDE COUNTY	383	16	0
TOTAL PERIODICALS	383	16	0
STANDARD MAIL:			
ENHANCED CARR RTE	-2	0	0
REGULAR	-1,008	-5	-1
TOTAL STANDARD	-1,011	-5	-1
PACKAGE SERVICES:			
PARCEL POST	-142	-3	-1
BOUND PRINTED MATTER	-23	1	0
MEDIA MAIL	3	1	0
PACKAGE SERVICES	-162	0	-1
US POSTAL SERVICE	203	7	0
FREE MAIL	27	1	0
INTERNATIONAL MAIL	670	20	-2
TOTAL MAIL	10,187	60	-147
OTHER	0	0	0
TOTAL	10,187	60	-147

1 VII. BASE YEAR PRIORITY MAIL AIR VOLUMES BY ZONE

2 This testimony also incorporates library reference USPS LR-J-96, Estimation
3 of Priority Mail Weight and Average Haul by Zone. This library reference is not
4 related to the development of the FedEx rollforward adjustment. Rather, witness
5 Scherer (USPS-T-30) uses the results of the library reference in developing Priority
6 Mail rates.

7 The pounds and average haul of base year Priority Mail air volumes are
8 calculated in the following manner. First, USPS operational databases are queried
9 to calculate the total volume of Priority Mail that travelled on air transportation in the
10 base year by origin and destination airport. Second, using the latitude and longitude
11 measurements for each origin and destination, the great circle miles (GCM) are
12 calculated for each origin-destination pair. Third, each origin-destination pair is
13 assigned a postal zone based on the GCM measurement. Fourth, the pound miles
14 for each origin-destination pair are calculated by multiplying the pounds by the GCM.
15 Fifth, the pounds and pound miles are aggregated by zone. Finally, pound miles are
16 divided by pounds for each zone to yield the average haul by zone.

17 USPS LR-J-96 documents the SAS programs used to carry out these
18 calculations.

