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

POSTAL RATE AND FEE CHANGES, 2000

Docket No. R2000-1

REBUTTAL TESTIMONY OF
RICHARD L. PRESCOTT
ON BEHALF OF THE
UNITED STATES POSTAL SERVICE

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1 Rebuttal Testimony
2 Of
3 Richard L. Prescott
4

5 AUTOBIOGRAPHICAL SKETCH
6

7 My name is Richard L. Prescott. I am Manager of Revenue, Volume and
8 Performance Measurement (RVPM), Statistical Programs, Finance. RVPM is
9 responsible for the Domestic Revenue, Pieces and Weight Sampling System
10 (DRPW), the Bulk Revenue, Pieces and Weight System (BRPW), the Revenue,
11 Pieces and Weight Adjustment System (ARPW), and the Revenue, Pieces and
12 Weight report.

13 I have been employed by the Postal Service since 1987. Before starting
14 to manage RVPM in January 1997, I worked first as a Senior Statistician
15 assigned to the Origin-Destination Information System (ODIS), and then as an
16 Economist and Project Leader of ARPW and RPW report production. Prior to my
17 employment with the Postal Service I worked for eight years at the United States
18 Department of Agriculture (USDA) as an Agricultural Economist. I published
19 many technical papers while at USDA and have contributed papers to the
20 American Journal of Agricultural Economics.

21 I was awarded a Bachelor of Science degree with a major in Economics
22 from the State University of New York at Binghamton in 1977. Upon completion
23 of the coursework requirements and the written examinations for a Ph.D. in
24 Agricultural Economics, I was awarded a Master of Science degree in
25 Agricultural Economics from the University of California at Davis in 1979.

1 I. PURPOSE AND SCOPE OF TESTIMONY

2 The purpose of my testimony is to address and elucidate issues involving
3 the RPW Parcel Post estimates. This testimony rebuts witness Sellick's
4 testimony, UPS-T-4, by showing that it is speculative and without support. I
5 further establish for the Commission the basic soundness of using PERMIT
6 System-derived permit imprint Parcel Post data for RPW in Government Fiscal
7 Year 1998, the proposed base year in this docket, by explaining how such use
8 reduces and eliminates possible sources of error. While I am not a PERMIT
9 System expert, I am an informed user of PERMIT System data and my testimony
10 should be viewed from that perspective.

11 The testimony is organized as follows: section two provides the history
12 and scope of PERMIT System and postage statement usage in the RPW report;
13 section three describes why postage statement data (provided to RPW via the
14 PERMIT System) are essential for accurate RPW estimation; section four
15 discusses the specific history and methods involved in the decision to use
16 PERMIT System Parcel Post data in the RPW report; section five rebuts specific
17 criticisms raised by witness Sellick; finally, section six presents a brief
18 conclusion.

1 II. HISTORY OF THE USE OF PERMIT SYSTEM AND POSTAGE
2 STATEMENT DATA IN THE RPW REPORT
3

4 In these proceedings, attention has been focused by United Parcel
5 Service (UPS) on the use of PERMIT System data in RPW. However, in a
6 certain sense, what underlies this line of inquiry is the use of postage statement
7 data in the RPW report. The PERMIT System is merely a conduit for capturing
8 data that enter the Postal Service mailstream through postage statements.

9 The use of postage statement data in producing the RPW Report is
10 longstanding. At the time I began working in the RPW area in 1989, the use of
11 PS Form 3541 data for Periodicals, PS Form 3602 data for permit imprint
12 Standard Mail (A) and PS Form 3605 data for permit imprint Bound Printed
13 Matter was already well established.¹ DRPW sampling data have never been
14 used for these mail categories, and DRPW does not sample them.

15 In 1992, because of budget pressures, the costly manual forms systems
16 noted above were discontinued and we relied solely on the PERMIT System to
17 provide electronic files of summarized postage statement data for RPW
18 processing. These electronic data were then combined with a sample of postage
19 statement data from non-PERMIT System offices to derive RPW report inputs of
20 bulk mail revenue, pieces and weight. This estimation approach exemplifies
21 what today is known as the BRPW System.

22 For reasons detailed in the next section, the use of PERMIT data for RPW
23 accelerated in the mid-1990s after the Postal Service started introducing
24 additional worksharing rate categories. PERMIT System data for presort and

1 automation First-Class Mail (all indicias) were used in RPW starting in PQ 1 FY
2 1995 and retroactively introduced into Government Fiscal Year 1994. PERMIT
3 System data for precanceled stamp and meter Standard Mail (A) began to be
4 used for RPW in PQ 1 FY 1997. Finally, in PQ 1 FY 1999 (December 1998) the
5 Postal Service began using permit imprint Parcel Post estimates from the
6 PERMIT System in RPW. At that time, in order to make prior year comparisons,
7 the Government Fiscal Year 1998 RPW report was revised using the updated
8 Parcel Post methodology and these revised reports provide the base year
9 volume estimates for Docket No. R2000-1.

¹ See witness Bailey's testimony, USPS-T-1, pages 5 and 6 in Docket No. R90-1.

1 III. POSTAGE STATEMENT DATA ARE NEEDED FOR RPW

2
3 The general policy the Postal Service has adopted in producing the RPW
4 report is to replace sample based estimates with census or near-census
5 estimates whenever possible, thereby minimizing statistical variance. While
6 census and near census-measures are also subject to potential nonsampling
7 error (e.g. misreporting, software errors), we prefer to use them in RPW reporting
8 because we expect any potential nonsampling error to be less than the
9 combined sampling and potential nonsampling errors of alternate sampling
10 estimates.

11 However, this general preference does not by itself drive the use of
12 postage statement data from the PERMIT System in RPW. Because of the
13 nature of Postal Service indicia, endorsement requirements, and mail
14 acceptance policies, a DRPW data collector cannot with certainty record the
15 actual revenue per piece of a selected mailpiece for some categories of bulk
16 entered mail. The visible revenue on the piece (if any) is not necessarily equal to
17 the revenue paid for the piece. Thus, using PERMIT System data for RPW is
18 more than a matter of reducing sampling error; it is essential to getting accurate
19 RPW report estimates for some bulk mail items because it is only from postage
20 statements that we can obtain accurate revenue per piece estimates. (Note that
21 this doesn't hold for single-piece mail which can be accurately identified in
22 DRPW by its per piece revenue and/or its *lack* of markings.)

23 The situation described above also holds for estimates of bulk mail
24 volume by rate category. To accurately classify a piece of mail to a specific rate

1 category, three characteristics are used: mailpiece endorsements, per piece
2 revenue, and per piece weight. RPW data collectors know the per piece weight
3 of a sampled mailpiece, but because some bulk mail categories lack suitable
4 mandatory endorsements they must depend on accurate per piece revenue to
5 classify the piece in a rate category successfully. When accurate per piece
6 revenue cannot be determined, this process breaks down.

7 There are at least four reasons why the visible postage on a piece of bulk
8 mail may not correspond with the postage actually paid:

- 9 1. When permit imprint or precanceled stamps are used on bulk mail there is no
10 visible postage. Even if the weight of the piece is known, the lack of suitable
11 mandatory endorsements prevents an accurate estimate of the postage.
12 (See number 4, below.)
13
- 14 2. Presort and automation rate metered mail may be paid for by metering an
15 entire mailing at the lowest postage required by any piece in the mailing.
16 Generating a meter strip for the amount owed and affixing it to the postage
17 statement then pays for the remaining amount due. (See DMM P013.1.5.)
18
- 19 3. Presort and automation rate metered mail may, under the "value-added"
20 program, be metered out at a given presort rate and then passed to a third-
21 party who by batching it with mail from other customers and deepening the
22 sortation level and/or affixing barcodes can then present it to the Postal
23 Service and pay a per piece rate less than the per piece affixed meter
24 postage. The third party then collects a refund from the Postal Service based
25 on the spread between the affixed meter postage and the required postage.
26 (See DMM P014.4.0.)
27
- 28 4. Required endorsements for presort and automation rate mail are not "fine-
29 grained" enough to identify a mailpiece's exact rate category. For instance,
30 the 3-digit and 5-digit presort barcoded Standard Mail (A) rates both require
31 the same endorsements: "Standard Mail Regular" and "AUTO." There is no
32 requirement for separate 3-digit and 5-digit endorsements for these rate
33 categories, respectively.
34

35 In all of these cases, a DRPW data collector cannot accurately record the
36 mailpiece's per piece revenue by observing the mailpiece. In each case, the

1 only source for accurate revenue and volume data by detailed rate category is
2 postage statements. As the number of rate categories increased in the mid-
3 1990s, so did the revenue identification issues that drive the use of PERMIT-
4 System derived postage statement data for RPW.

5 A recent example of this is the introduction in January 1999 of new
6 dropship discounts for Parcel Post. Previously only a DBMC discount existed.
7 Docket No. R97-1 (effective January 10, 1999) introduced DSCF and DDU
8 dropship discounts, but specific endorsements for these rates were not required.
9 A single "Dropship" (or "D/S") endorsement is all that is currently required for
10 DBMC, DSCF, or DDU dropship Parcel Post mail. DRPW data collectors thus
11 cannot distinguish between these rate categories based on the markings and
12 since most of this mail uses permit imprint indicia, accurate revenue per piece
13 identification (and volume classification by rate category) cannot be
14 accomplished when sampling this mail at Mail Exit Points. Only postage
15 statement data can be used to do this. If the Postal Service had not switched to
16 using PERMIT System-derived postage statement data in FY 1999, it would
17 have inaccurately estimated the revenue and volume for Parcel Post and its rate
18 categories. Note that once this new data series was introduced in FY 1999, it
19 was imperative to recast the FY 1998 RPW report using the same methodology
20 because (a) comparisons to the prior year were needed and (b) the most
21 accurate available data should be used in any rate proceeding.

22 In this section, I illustrated the necessity for using PERMIT System-
23 derived postage statement data in the RPW Report with a specific emphasis on

1 the need to use postage statement data for RPW estimates of Parcel Post. In
2 the next section, I will discuss the history of the Parcel Post revision. Witness
3 Sellick (UPS-T-4) argues that any errors in PERMIT System data for Parcel Post
4 somehow warrant the continued use of DRPW. I will show later in Section five
5 that errors in PERMIT System data affecting Parcel Post are minor and
6 immaterial and that given the consistent evidence of serious DRPW Parcel Post
7 undercounting, use of the PERMIT System is the right and correct way to
8 measure Parcel Post volume.

1 IV. THE PARCEL POST REVISION: HISTORY AND METHODS

2 Witness Sellick claims the Postal Service implemented the Parcel Post
3 revision without "external validation." USPS-T-4, page 20, lines 17-18. This
4 would be a shortcoming, if true, because it would leave unchecked the possibility
5 that PERMIT System data could be seriously flawed.

6 In fact, the Postal Service validated the use of PERMIT System-derived
7 permit imprint Parcel Post data in RPW. UPS apparently chose to attack the
8 massive data underlying the BRPW results rather than to inquire directly into the
9 reasoning behind the switch to BRPW. Strong indications of the discrepancy
10 between permit imprint Parcel Post estimates from DRPW and the PERMIT
11 System first came to light in late FY 97. The PERMIT System was yielding
12 greater estimates of permit imprint Parcel Post revenue and volume than DRPW.
13 We were hesitant to move immediately to use of the Parcel Post PERMIT
14 System data in RPW, however, without knowing more about what might be
15 causing the discrepancy. We considered two possible contributing factors: (a)
16 we were unsure if mailers were marking their drop ship parcels with the (at that
17 time) required "DBMC" endorsement and (b) the DRPW panel was updated
18 beginning PQ 1 FY 98 to include all CAG C offices, and we didn't know if this
19 would affect the discrepancy. Additionally, we inquired whether the PERMIT
20 System transactions data were being summarized correctly in the Corporate
21 Business Customer Information System (CBCIS) data that were used as a
22 source of aggregated PERMIT System Parcel Post data.

1 During FY 1998, we undertook a number of tasks to learn more about
2 these concerns:

- 3 1. A study was conducted of DBMC parcel shipper endorsement practices. It
4 was found that they adequately complied with the drop ship marking
5 requirements. Therefore, properly endorsed DBMC items should have been
6 identifiable by a DRPW data collector.
7
- 8 2. The results of the PQ 1 FY 98 DRPW sampling improvements were analyzed
9 and we found no significant impact on the DRPW Parcel Post data. The
10 discrepancy between DRPW and the PERMIT System still existed after
11 updating the DRPW panel.
12
- 13 3. A study was conducted on the accuracy of the movement and roll-up of
14 PERMIT transaction level data through CBCIS to the BRPW input file. No
15 material errors in this process were found. (See LR-I-279 and response to
16 USPS-T5-43.)
17
- 18 4. Comparisons of DRPW and PERMIT System Parcel Post volume time series
19 estimates with a third source, the ODIS system, showed that ODIS permit
20 imprint Parcel Post volume data aligned well with the PERMIT System data,
21 not the DRPW data.
22
- 23 5. At a series of Statistical Programs conferences, field Statistical Programs
24 managers and data collectors were consulted on the data discrepancy. The
25 shared consensus was that some DRPW data collectors were considering all
26 Standard Mail (B) permit imprint mail to be ineligible for sampling. In other
27 words, some data collectors were erroneously treating permit imprint Parcel
28 Post the same way they treated permit imprint BPM which is the only
29 Standard Mail (B) category ineligible for DRPW sampling. (The fact that
30 Standard Mail (A) is also ineligible for DRPW sampling contributed to this
31 problem.) Other possible reasons for the undercount were (a) not sampling
32 Parcel Post bearing the "Bulk" payment marking because of its similarity to
33 the Standard Mail (A) "Bulk Regular" marking; and, (b) not sampling any
34 permit imprint Parcel Post that enters the Postal Service weighing less than a
35 pound; this mail could be misidentified as Standard Mail (A) and would be
36 viewed as ineligible for sampling. (The material in this item was also
37 discussed in the Postal Service's response to POIR-15, item 2a.)
38

39 Parallel to the work described above, a BRPW module for permit imprint
40 Parcel Post was designed and tested. A survey conducted in FY 1997 for
41 general BRPW purposes (USPS-LR-I-403) facilitated this by ascertaining the

1 magnitude of permit imprint Parcel Post entered at non-PERMIT System sites
2 which then allowed us to assess the need for a supplemental BRPW panel.
3 Finally, PERMIT System-derived postage statement data were used for permit
4 imprint Parcel Post inputs in the PQ 1 FY 1999 RPW report. As mentioned
5 above, FY 1998 data were also revised at this time.

6 The previous material demonstrates that, with respect to RPW Report
7 methodology, the Postal Service implemented the switch to using PERMIT
8 System-based Parcel Post inputs in a measured, considered, and reasoned
9 fashion. As the manager responsible for the production of the RPW report, I
10 concluded that the use of PERMIT System-derived Parcel Post data in RPW was
11 necessary and an improvement over the use of DRPW for the permit imprint
12 Parcel Post RPW inputs.

1 VI. ADDITIONAL REBUTTAL ITEMS

2 This section addresses other issues raised by witness Sellick that attempt
3 to impugn the acceptability of PERMIT System data used in RPW.

4 1. Lack of a True Trial Balance Adjustment

5 Witness Sellick says the use of permit imprint Parcel Post data from the
6 PERMIT System for the Government FY 1998 RPW report should not be allowed
7 in these proceedings because "Unlike other BRPW mail categories, the 1998
8 BRPW Parcel Post estimates are not subject to a unique trial balance account
9 adjustment." (UPS-T-4, at 30, lines 12-13.) However, witness Sellick ignores
10 the fact that BRPW estimates for precanceled stamp and meter presort and
11 automation First-Class and Standard Mail (A) are used in RPW, and there are no
12 specific trial balance categories for these items. The use of a trial balance
13 account to control RPW inputs is not mandatory in RPW report production. It is
14 used when it exists for a mail category. Using FY 1998 PERMIT System Parcel
15 Post data controlled to an interim factor (1.0092075) constructed from recent
16 census data (see LR-I-230) is more accurate than using an underestimate of
17 Parcel Post from DRPW.

18 2. Lack of Detailed Weight Information

19 Witness Sellick says that using "the new system provides less detail on
20 the volume of mail by weight increment, rendering billing determinants less
21 accurate." (UPS-T-4, at 30, lines 7-19.) While it is true the PERMIT System
22 provides less weight distribution detail than DRPW, witness Sellick does not
23 provide *a priori* argument or empirical evidence that applying DRPW-based

1 distribution keys to PERMIT System-derived totals yields inaccurate weight
2 distributions. In any case, revenue and volume are key parts of the billing
3 determinant process and BRPW does a better job than DRPW of estimating
4 these for Parcel Post. I understand that the analysts who prepare the Billing
5 Determinants are familiar with the PERMIT System-derived Parcel Post data in
6 RPW and have developed and used these in accordance with their own
7 professional judgment.

8 3. Data Collector Inability to Distinguish Indicia

9 Witness Sellick posits that DRPW data collectors cannot accurately
10 distinguish between permit imprint and other indicia (stamp and meter) during a
11 RPW test. (USPS-T-4, at 28, lines 8-11; at 29, lines 1-3 & 13-15.) He correctly
12 points out the importance of this distinction in later RPW report processing
13 because DRPW permit imprint Parcel Post records must be excluded from
14 ARPW (i.e., the system that combines DRPW and BRPW data) to avoid double
15 counting. However, his testimony consists merely of speculation for he has
16 presented no evidence that making this distinction poses any difficulty to DRPW
17 data collectors, or that errors of this type even occur. Given the complete
18 absence of evidence, there is no reason to conclude DRPW data collectors
19 cannot distinguish between a permit imprint and a stamp or meter. Finally, my
20 experience is that summary DRPW data by indicia aligns well with that from
21 other Postal data sources.

1 4. Inspection Service Financial Audit Results

2 Witness Sellick has cited summary Inspection Service financial audit
3 results that mention deficiencies in bulk mail acceptance procedures as a criteria
4 for potentially rejecting the use of PERMIT System data in RPW. (USPS-T-4 at
5 24, line 18; at 25, lines 1-2.) However, he does not say how these deficiencies
6 might lead to a specific type of recording error. Additionally, he does not and
7 cannot project the reported deficiencies to any level of systematic error in the
8 BRPW data. Therefore he does not establish that the magnitude or pattern of
9 these deficiencies somehow warrant not using PERMIT System data in the RPW
10 report. While any found deficiencies need management attention, the existence
11 of financial audits shows how seriously the Postal Service takes its commitment
12 to obtain the best available data and to take advantage of opportunities for
13 improving its quality still further.

14 5. LR-I-401 and Replicating BRPW Inputs

15 The Postal Service provided data (USPS-LR-I-401) in response to
16 Presiding Officer's Ruling No. R2000-1/48 that provides a proxy means for rolling
17 up PERMIT System data into the BRPW input records. The Postal Service
18 warned, however, that this roll-up was not identical to the CBCIS roll-up actually
19 employed. As explained in the April 5, 2000 pleading that preceeded the
20 issuance of POR-48, "The least burdensome means of looking at the roll-up
21 would be via an outside contractor, and it retains information that is similar, but
22 not identical, to postage statement level." Therefore, from the Postal Service's

1 perspective, LR-I-401 was not expected to provide a perfect replication of the
2 BRPW inputs.

3 The LR-I-401 data set provided a basis for aggregating data from an
4 approximate postage statement level to the CBCIS RPW extract level, which is
5 the level at which CBCIS data are used as an input for BRPW. While the LR-I-
6 401 data replication process and the CBCIS RPW extract production process
7 both start from PERMIT System data, the sequences of operations are not
8 identical, the software and hardware systems and the code differ, and the actual
9 times and periods over which the data are taken from the distributed source VAX
10 computers are not the same. Thus a data user should not be surprised that a
11 replication based on LR-I-401 data does not match CBCIS data perfectly.

12 The ultimate question answered in the affirmative by LR-I-401 is, does its
13 data substantially replicate the CBCIS extract file used for BRPW. Revenue
14 matches to 0.16%, volume to 0.16%, and weight to 4.2%. The revenue and
15 volume differences are miniscule. The weight difference is small. These
16 discrepancies in no sense imply that PERMIT System Parcel Post data should
17 not be used.

1 VI. CONCLUSION

2 My testimony reviews and explains the necessity for using PERMIT
3 System data in the RPW report production process and why, since the last
4 omnibus rate case, great reliance has been placed on postage statement-based
5 BRPW data for permit imprint Parcel Post. I have demonstrated the long history
6 of this use and its necessity. With respect to the change to using PERMIT
7 System data for RPW Parcel Post estimates, I reviewed the underlying reasons
8 for doing this and described the actions the Postal Service went through to
9 guarantee the change was warranted and correctly implemented. Finally, I have
10 addressed various points raised by witness Sellick and UPS that attempted to
11 show PERMIT System deficiencies should rule out its use as a source for Parcel
12 Post inputs in GFY 98 RPW. I have shown that these points are ill founded and
13 unsupported by evidence, and irrelevant to establishing accurate Parcel Post
14 revenue and volume estimates for RPW. To conclude: there is no basis for not
15 using PERMIT System Parcel Post inputs in the RPW reporting process. On the
16 contrary, considerations of data quality require that PERMIT System data be
17 used.