UNITED STATES OF AMERICA
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

Six-Day to Five-Day Street Delivery   Docket No. N2010-1
and Related Service Changes

CHAIRMAN'S INFORMATION REQUEST NO. 7

(Issued July 2, 2010)

The Postal Service is requested to respond to the following questions to clarify the record on its request for an advisory opinion under 39 U.S.C. 3661(c) for the elimination of Saturday delivery, filed March 30, 2010. In order to facilitate inclusion of the required material in the evidentiary record, the Postal Service is to have a witness attest to the accuracy of the answers and be prepared to explain, to the extent necessary, the basis for the answers at hearings. Responses should be provided no later than July 12, 2010.

1.   Please provide a table (in the format provided as an example following this question) with the number of routes, by district, currently receiving 1, 2, 3, 4, 5, or 6 days of delivery, respectively.

	1 Day	*2 Days*	*3 Days*	*4 Days*	*5 Days*	*6 Days*
District 1						
District 2						
...						
District n						

2.   At the Rapid City, South Dakota and Buffalo, New York field hearings, the
        Commission received testimony about the practice of rural carriers
        carrying mail between post offices that is destined for home or post office
        box delivery at the receiving post office. The Commission heard concerns
        that if the Postal Service implements its five-day plan, this transportation
        link would be eliminated and post office box recipients in the receiving
        office would not receive mail on Saturday as they currently do. Please
        provide:

   a.   the number of routes on which carriers (rural or city) serve as a
           means of transporting mail between post offices;

   b.   the number of post offices and post office boxes that are dependent
           on such carrier transport;

   c.   the amount of mail volume involved; and

   d.   a description of how the elimination of the carrier transporting mail
           between post offices on Saturday will affect service to post office
           box patrons dependent on such transport.

3.   Service performance is measured in delivery days, that is, the number of
        days on which the Postal Service makes deliveries that elapse between
        mailing and delivery. Under the Postal Service's proposal, no change in
        existing service performance standards is proposed. In some instances,
        however, the number of calendar days that elapse between mailing and
        delivery will necessarily increase. Based on current mailing patterns,
        please quantify (or estimate) the portion of mail that would experience a
        delay in calendar days to delivery, and break out the number of additional
        calendar days for delivery of that mail. Please provide results for all mail
        and by class or product.

For example: Total First Class pieces   xx pieces

Delayed one calendar day   xx pieces

Delayed two calendar days   xx pieces

(*e.g., mail delivered Monday instead of Saturday)*

Delayed three or more calendar days   xx pieces

The following question pertains to the testimony of witness Neri (USPS-T-4).

4.   Witness Neri calculates the net savings in mail processing workhours in a five-day delivery environment. *See* USPS-LR-N2010-1/5, workbook "Mail_processing_background_3_30_10.xls." Please provide, in the same format (including all the same columns) as provided in the spreadsheet "Box DPS on Sat," site-level P.O. Box Saturday delivery volume for one Saturday in each of the other three quarters of FY 2009. Any Saturday in each quarter will be sufficient, so long as there are data from a Saturday in each quarter of FY 2009.

The following questions pertain to the testimony of witness Bradley (USPS-T-6).

5.   The Postal Service cites various reasons for basing its estimates of the costs saved by eliminating Saturday delivery on qualitative operational analysis rather than quantitative analysis of economies of density or of excess capacity. *See* Response to Chairman's Information Request (CHIR) No. 3, questions 5 and 8. Its operational analysis concludes that in the context of shifting Saturday volume to Monday delivery, Monday city carrier street costs would be increased by only 10 percent of Saturday city carrier street variable costs (plus added collection costs) and 66 percent of Saturday in-office costs.

    a.   What specific operational mechanisms or engineering phenomena are expected to bring about the absorption of 90 percent of the variable costs of delivering the added volume on Mondays?

b.   Because different areas/districts may have different capacities to absorb displaced Saturday volume on Monday (or Tuesday, in the case of a holiday), please describe and discuss the operational changes required in different areas/districts that will be adopted to most efficiently absorb the displaced Saturday volume.

c.   USPS-LR-N2010-1/3, at page 3, states:

> The street time includes transporting mail to and loading the vehicle, driving to and from the route, driving between stops while on the route, reaching for and fingering the mail at the point of delivery, and placing mail in the mailbox—**tasks that are mostly unaffected by volume.** (Emphasis added.)

The major activities referenced in this quote closely resemble the division of street time into functions that were analyzed for volume variability by the Postal Service and the Commission prior to Docket No. R2005-1. *See, e.g.,* Docket No. R87-1, Opinion and Recommended Decision, March 4, 1988, at 218. Specific engineering phenomena called "cost drivers" were identified that were found to cause street time to vary with volume. In the case of "driving between stops while on the route" (labeled "access time" in pre-R2005-1 analysis) the cost driver was stop coverage. In the case of "fingering the mail at the point of delivery" (labeled "load time" in pre-R2005-1 analysis) the cost driver was pieces-per-actual-delivery (ppd). As stop coverage or ppd rose, the volume variability of these functions fell (their absorption of volume increased). Is the change in these cost drivers the primary source of the 90 percent absorption of street time hours that the Postal Service expects on Mondays after the elimination of Saturday delivery?

d.   In the pre-R2005-1 analysis, access time and load time comprised the majority of street time. The rate at which those costs would be absorbed would be a function of changes in those cost drivers. To corroborate the expected street time cost absorption of 90 percent, please provide the percent increase in the stop coverage and pieces-per-delivery cost drivers that would be expected to occur on Mondays (or Tuesdays, in the case of a Monday holiday) under the five-day delivery scenario. Please do this using the most recent fiscal year for which data on stop coverage and ppd are available. If date-specific City Carrier Cost System data is not available and sufficient to perform such an analysis, please explain.

e.   The passage from USPS-LR-N2010-1/3 quoted in subpart c., above, asserts that the listed tasks are "mostly unaffected by volume." Of those listed tasks, load time was the largest in terms of its contribution to attributable street time costs under the Postal Service's pre-R2005-1 analysis. In the past, the Postal Service has consistently estimated that load time is more than 95 percent variable with volume. Under pre-R2005-1 analysis, the Postal Service's estimates of load time as a percent of total street time have ranged from 25 percent (based on the Street Time Sampling System) to 38 percent (based on the Engineered Standards study).

   i.   If the load time task is nearly 100 percent variable with volume and it accounts for 25 to 38 percent of total street time, can these estimates be reconciled with an expected street time absorption factor of 90 percent under the five-day delivery scenario?

ii.   If load time depends on the volume of mail that is delivered at each individual delivery point, rather than on the number of routes served by a delivery unit, is there any reason to believe that the volume variability characteristics of this task should change under the five-day delivery scenario?

6.   The response to CHIR No. 5, question 12 states that aggregate city carrier delivery cost functions of Cobb-Douglas form and that other more flexible specifications are candidates for future econometric investigation of cost impacts from moving to five-day delivery. The response centers around the construction of aggregate cost models where the frequency of delivery over specified time periods (weekly) enters as a separate explanatory variable. However, the Commission is still left with the present task of evaluating city carrier savings without resort to future data that might provide a more definitive resolution to this issue.

Therefore, as another alternative to other cost impact approaches presented by the Commission in previous questions, please consider the following approach that would use daily cost and volume data in estimating cost savings for an entire year. The data to be used, posed in this alternative, is available in the FY 2009 DOIS database that was filed with the Commission as USPS-LR-2010-1/6 and in response to CHIR No. 3, question 10.

Consider total delivery costs for some week i to be the sum of daily delivery costs for that week. Cost for any day t in week i is specified as a function of delivery volume and possible deliveries for that particular day. Therefore, the delivery cost for that day can be shown as $c(v_{it}, PD_{it})$ and the total cost for week i is $C_i = \sum c(v_{it}, PD_{it})$, where $t = 1,2,\ldots,T_i$. Because of holidays, T_i (the number of delivery days for any week i) is variable.

Indexing Saturday as $t = 1$, Monday as $t = 2$, and so on, the Saturday cost saving for any week i is $c_{i1} = c(v_{i1}, PD_{i1})$, where c_{i1} is revealed from the data. A first order approximation for the cost increase (the offset) from diverting Saturday volume for delivery on other days can then be shown as $\sum \Delta c_{it} \approx \sum (\partial c(v_{it}, PD_{it})/\partial v_{it})^* \Delta v_{it}$, subject to the no volume loss constraint $v_{i1} = \sum \Delta v_{it}$ where $t = 2,\ldots,T_i$. The constraint states that the sum of the new volume increments on each of the non-Saturday delivery days $\sum \Delta v_{it}$ must sum to the original Saturday volume v_{i1}. Therefore, net city carrier delivery savings for week i can be approximated by summing the known Saturday savings less the approximated offset:

$$\Delta C_i \approx c_{i1} - \sum (\partial c(v_{it}, PD_{it})/\partial v_{it})^* \Delta v_{it}. \tag{1}$$

From the daily cost function, the volume variability for each delivery day in week i can be specified as: $VV_{it} = (\partial c(v_{it}, PD_{it})/\partial v_{it})v_{it}/c_{it}$.

Therefore substituting in (1) yields $\Delta C_i \approx c_{i1} - \sum VV_{it}^*(c_{it}/v_{it})^* \Delta v_{it}$ or:

$$\Delta C_i \approx c_{i1} - \sum VV_{it}^* c_{it}^*(v_{i1}/v_{it})^* \Delta v_{it}/v_{i1}, \tag{2}$$

where $1 = \sum \Delta v_{it}/v_{i1}$ from the no volume loss constraint. Now suppose volume variability is a constant value VV. Then (2) can be expressed as:

$$\Delta C_i \approx c_{i1} - VV^*[\sum c_{it}^*(v_{i1}/v_{it})^* \Delta v_{it}/v_{i1}]. \tag{3}$$

It follows that if VV is known, and daily volume and cost values are revealed from the data, then ΔC_i can be approximated given any distribution of Saturday volumes among the remaining delivery days (the individual Δv_{it} values).

To illustrate, if all Saturday volume is assumed to be delivered on a non-holiday Monday, then $\Delta v_{i2} = v_{i1}$ and (3) simplifies to $\Delta C_i \approx c_{i1} - VV^* c_{i2}^* v_{i1}/v_{i2} = c_{i1}^*(1 - VV^*(c_{i2}/c_{i1})^* v_{i1}/v_{i2})$. If volumes and possible deliveries on the two days are the same, then so are costs and therefore $\Delta C_i \approx c_{i1}^*(1 - VV) = c_{i2}^*(1 - VV)$. However, with Saturday volume less than Monday volume, $(c_{i2}/c_{i1})^* v_{i1}/v_{i2} < 1$ can be expected in general

(because of concavity in the cost function), and therefore the cost decrement is greater than if volumes are equal on both days.

Please comment on the usefulness of the above approach, or any extension/modification to the approach that could be added, for estimating cost savings for each week, using system level known daily volumes and costs by week for an entire year using FY 2009 DOIS data. In your comments, please identify the various distributions of Saturday volumes for delivery on other days useful for evaluation to establish a range of possible cost savings.

By the Chairman.

Ruth Y. Goldway