Postal Regulatory Commission
Submitted 7/8/2010 2:30:10 PM
Filing ID: 68859
Accepted 7/8/2010

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

Six-Day to Five-Day Street Delivery
and Related Service Changes

Docket No. N2010-1

CHAIRMAN'S INFORMATION REQUEST NO. 8

(Issued July 8, 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 13, 2010.

The following questions pertain to the direct testimony of witness Granholm (USPS-T-3).

1. The following table, prepared from data provided in the file "CHIR.S.Q.10.DOIS.Attach.xls," filed on May 14, 2010, appears to show a relationship between street time productivity and mail preparation. Monday has the highest street time productivity, the highest percentage of Delivery Point Sequenced (DPS) mail volume, and the lowest percentage of mailer sequenced volume. Saturday has the second highest street time productivity, the second highest percentage of DPS, and the second lowest percentage of mailer sequenced mail. Tuesday and Wednesday, which have relatively low street time

productivity, rank 6th and 5th respectively in DPS volume and 1st and 2nd in mailer sequenced volume.

				RANK		
Weekday	**Street Productivity (Total Mail Volume/Street Hours)**	**Percentage of Daily Mail Volume that is Delivery Point Sequenced**	**Percentage of Daily Mail Volume That is Mailer Sequenced**	**Street Productivity**	**Percent Delivery Point Sequenced**	**Percent Mailer Sequenced**
Monday	451.0	67.5%	3.7%	1st	1st	6th
Tuesday	373.9	56.0%	13.2%	4th	6th	1st
Wednesday	361.1	56.3%	13.1%	6th	5th	2nd
Thursday	367.9	61.7%	8.0%	5th	4th	3rd
Friday	377.2	63.1%	7.3%	3rd	3rd	4th
Saturday	377.4	64.1%	5.1%	2nd	2nd	5th

a. Is the higher percentage of mailer sequenced mail delivered on Tuesday, Wednesday and Thursday due to deferral of mail that arrived at the delivery unit in time for delivery on Monday? If not, please explain.

b. Please discuss how, for a given day of the week, a change in the mix of DPS and mailer sequenced volume as percentage of delivered volume affects street productivity.

c. Please estimate, after the elimination of Saturday delivery, the distribution of volume by mail type for each day of the week.

2. According to the data provided in USPS-LR-N2010-1/3, approximately 10,000 routes were eliminated during FY 2009.

a. What are the inputs to the Carrier Optimal Routing (COR) and Joint Alternate Route Assessment Process route restructuring models?

b. How does the route restructuring process, and the COR model in particular, accommodate delivery days with higher volumes; for example, peak load volume on Mondays?

c. What additional mail processing costs are associated with route restructuring; for example, processing Carrier Route mail on an Incoming Secondary sort until mailers adjust their presort schemes to the new route schemes?

d. Please provide for each district:

i. The number of routes that were eliminated during FY 2009; and

ii. The number of routes that have been eliminated year to date for FY 2010.

3. Please provide a detailed explanation of the process used to restructure routes. If the process used to restructure routes varies from district to district, please provide a detailed explanation of the process used to restructure routes for each district.

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

4. Please provide the district level city carrier daily volumes, the total number of routes, and in-office and street costs for FY 2009 from the DOIS database. Please provide this data for each district in the same format and level of detail as provided in the response to CHIR No. 3, question 10.

5. Please refer to CHIR No. 5, question 10 where the system-wide delivery cost function of the form C(V, N, Z)*k = C(V*k, N*k, Z) is described. This function shows that system-wide delivery costs vary in the same proportion as volume, V, and delivery frequency N. The proportionality factor in the expression is K. Thus if volume and delivery frequency both increase by 20 percent (k = 1.2), then

according to this formulation, total delivery costs would also increase by the same percent. Notice that if both sides are differentiated by the proportionality factor k, then one obtains $C = (\partial C/\partial V)*V + (\partial C/\partial N)*N$ and dividing by C yields $1 = (\partial C/\partial V)*V/C + (\partial C/\partial N)*N/C$. The last expression shows that the sum of the volume variability $(\partial C/\partial V)*V/C$ and the delivery frequency variability $(\partial C/\partial N)*N/C$ is one. Therefore the delivery frequency variability is one less the volume variability or:

$$(\partial C/\partial N)*N/C = 1 - (\partial C/\partial V)*V/C. \quad (1)$$

Notice that a first order estimate of the cost impact following a change in delivery frequency can be shown as $\Delta C \approx (\partial C/\partial N)*\Delta N$. Using (1), this can be restated as $\Delta C \approx C*(1 - (\partial C/\partial V)*V/C)*\Delta N/N$, or

$$\Delta C \approx (C - VVC)*\Delta N/N, \quad (2)$$

where system level volume variable cost, VVC, equals $(\partial C/\partial V)*V$. In this last form, the cost savings estimate from changing the delivery frequency by the fraction, $\Delta N/N$, is equal to the product of institutional costs, C – VVC, and this fraction.

Please also refer to the delivery cost function $C = N*\theta*D + a(Z)*V^{\varepsilon}N^{(1-\varepsilon)}$, described in the response to CHIR No. 5, question 12.

a. Please confirm that this function exhibits the proportionality assumption described above. If not, please explain.

b. If you confirm a., please confirm that if $\varepsilon = 1$, the function is linear and therefore the estimate provided by (2), using this function, is exact. If not, please explain.

c. If you confirm a., please confirm that if $0 < \varepsilon < 1$, the function is non-linear (exhibiting declining marginal costs with respect to volume), and therefore the estimate provided by (2), using this function, is a strict approximation. If not, please explain.

6. Consider the quadratic function $C = N*\theta*D + a(z)*V + b(z)*V^2/N$ where $b(z) \neq 0$. Please confirm that this function also exhibits the described proportionality properties and can therefore be used to provide a first order approximation to cost savings according to (2), identified in question 5, above. If not, please explain.

7. Please confirm that any linear or non-linear function exhibiting the described proportionality properties can be used to provide a first order estimate of cost savings according to (2), identified in question 5, above. If you cannot confirm, please provide and describe a counter-example with the described proportionality properties showing that the first order estimate given by (2) does not apply.

By the Chairman.

Ruth Y. Goldway