

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

PERIODIC REPORTING
(PROPOSALS SIXTEEN THROUGH TWENTY)

Docket No. RM2012-2

RESPONSES OF THE UNITED STATES POSTAL SERVICE
TO QUESTIONS 1-9 OF CHAIRMAN'S INFORMATION REQUEST NO. 1
(January 10, 2012)

The Postal Service hereby provides its responses to Questions 1 through 9 of Chairman's Information Request No. 1, issued on December 30, 2011. Each question is stated verbatim and followed by the response.

Respectfully submitted,

United STATES POSTAL SERVICE

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January 10, 2012

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Question 1 (Proposal Sixteen)

Please confirm that the productivity measurement in Proposal Sixteen will be calculated as the MODS TPF (from operation 538) divided by the sum of MODS hours in operations 530 and 538. On page 4 of the Petition supporting Proposal Sixteen, the Postal Service states: "The proposed FSS productivity will use TPH from operation 538 in the numerator and the sum of workhours from operations 530 and 538." *(The productivity column shown on the worksheet tab called "MODS Data E23" in Prop18PERFlatsRevised.xls is labeled as TPF/hour (emphasis added)).*

RESPONSE:

Confirmed. Please note that the use of MODS TPF is consistent with the treatment of other automated distribution operations in FY 2011 Annual Compliance Report folder USPS-FY11-23.

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Question 2 (Proposal Sixteen)

The current FSS productivity measurement of 833 pieces per hour is substantially lower than that for other flats processing equipment (*e.g., AFSM100 in primary sort is 1,711 pieces per hour*). Please explain the reasons for these large differences and what range the FSS productivity is expected to achieve after “FSS stabilization”.

RESPONSE:

The FSS productivity measurement in Proposal Sixteen is not directly comparable to AFSM100 productivities. Two main factors account for the apparently low measured FSS productivity.

First, DPS sorting on FSS is a two-pass process. A TPF count in the FSS DPS operation (MODS operation 538) occurs when the piece is initially fed into the machine. Significantly, re-feeding the piece for the second pass does not result in an additional TPF count in operation 538. Thus, a TPF count in operation 538 generally represents two sorting passes;¹ whereas a TPF count in an AFSM100 operation represents a single sort pass.

Second, the proposed FSS productivity includes workhours for flat preparation activities on the Stand-Alone Mail Prep machine (MODS operation 530). In contrast, flat prep work hours related to AFSM100 operations (MODS operations 035 and 140) are not included in the calculation of AFSM100 productivities. Flat prep workhours are substantial — in aggregate, the FSS cost pool has 1.63 million workhours in operation 530 versus 1.07 million in operation 538, per ACR2011 folder USPS-FY11-7, Table I-

¹ An exception would be pieces withdrawn from the machine as first-pass rejects, and a small fraction of pieces will be finalized on the first pass. MODS data show that the FY 2011 reject rate was 10.5 percent (the FSS TPH/TPF is 0.895 in USPS-FY11-23, YRscrub2011.Prop16-17.xls), implying that pieces inducted into the FSS machine receive approximately 1.9 sort passes on average.

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2B. Thus, the inclusion of operation 530 prep workhours in the proposed FSS productivity results in a measured productivity that is approximately 40 percent (1.07/2.7) of a distribution-only productivity calculation. Aggregate (unscreened) FY2011 MODS data for operation 538 yield FSS distribution productivities of 1,981 TPF/hour and 1,770 TPH/hour. The FSS productivity target is 2,711 TPH/hour. Considering the above factors, the distribution productivity for FSS sorting is not substantially lower than that for other flat sorting equipment. On an “apples-to-apples” basis with distribution productivities for single-pass processes on other flat sorting equipment, FY2011 FSS distribution productivity would be 3,764 sort passes per workhour.² By comparison, incoming secondary distribution productivity for all varieties of AFSM100 equipment in FY2011 was 2,898 TPF/hour (see Docket No. ACR2011, USPS-FY11-23, YRscrub2011.xls).

² As an illustrative calculation, 1981 TPF/hour × 1.9 sort passes per TPF = 3,764 sort passes/workhour.

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Question 3 (Proposal Seventeen)

Please provide the specific MODS operation code changes associated with Proposal Seventeen for the productivity groups used in FY 2010. Please specify which MODS operation codes will be added to another productivity group, which codes will be deleted from an existing productivity group (or MODS), and any other MODS operation codes changes that map to the productivity groups.

RESPONSE:

See the attached spreadsheet file ChIR_No_1_3.xls for a list of the MODS operation code changes associated with Proposal Seventeen.

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Question 4 (Proposal Seventeen)

Please provide the input data to the TSP scrub program (yr_scrub.tsp filed in Docket ACR2010, USPS-FY10-23) used to calculate the new productivities submitted with Proposal Seventeen.

RESPONSE:

Please see the attached files TPH10.txt, TPF10.txt, and HRS10.txt for the requested data.

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Question 5 (Proposal Seventeen)

Please provide coefficients of variation for each of the proposed groups on page 6 of the Petition.

RESPONSE:

Estimated coefficients of variation are presented in the table below. Supporting calculations are provided in the attached file ChIR_No_1_5.xls. Since the productivities are based on census-type data, the coefficients of variation do not have the usual interpretation as a measure of relative sampling error for the estimates. Rather, the variability in the underlying data are due to a combination of actual variation in the MODS data (workhours and workloads) between and within facilities, and potential non-sampling errors in the MODS data (e.g., inconsistency of clocked workhours and workloads).

Since the productivities are calculated as ratios of sums of TPF to sums of hours, and have complex distributions, the CVs are computed using a standard approximation for the variance of a ratio. This formula is:

$$Var(R/S) \cong (E^2(R)/E^2(S)) \cdot (Var(R)/E^2(R) - 2Cov(R,S)/E(R)E(S) + Var(S)/E^2(S))$$

Operation Group	Coefficient of Variation (FY2010)
Out BCS Primary	0.7%
Out BCS Secondary	3.3%
In BCS MMP	1.0%
In BCS SCF/Primary	0.9%
In BCS Secondary (1 Pass)	2.1%
In BCS Secondary (2 Pass)	0.4%

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Question 6 (Proposal Seventeen)

Productivities from USPS-FY10-23 are used as inputs in the following models: (1) First-Class Mail Presort Letters and Cards and Standard Mail Regular Presort Letters Cost Models; (2) Flats Cost Models (First-Class Mail and Standard Mail) and Periodicals Cost Model; and, (3) Bound Printed Matter Mail Processing Cost Model / Media Mail-Library Mail Processing Cost Model. Please estimate the impact Proposal Seventeen will have on the unit avoided cost estimates in these models.

RESPONSE:

- (1) The impact that the Proposal Seventeen productivity measurements have on any measured cost avoidance estimates is the same as the impact that the productivity measurements have on the mail processing unit cost estimates. The First-Class Mail presort letters impact is shown below in Table 1. The Standard Mail presort letters impact is shown below in Table 2.
- (2, 3) The ISS and OSS productivity values are not used as inputs to these cost models. Consequently, Proposal Seventeen has no impact on the cost estimates that are developed using these models.

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TABLE 1: FIRST-CLASS MAIL PRESORT LETTERS IMPACT

	[A]	[B]	[C]
PRICE CATEGORY	TOTAL MAIL PROCESSING UNIT COST (CENTS)	TOTAL MAIL PROCESSING UNIT COST (CENTS)	COST DIFFERENCE (CENTS)
Letters:			
Metered Letters	13.611	13.611	0.000
Nonautomation Presort Letters (machinable)	9.299	8.382	(0.917)
Automation MAADC Presort Letters	8.802	8.843	0.041
Automation AADC Presort Letters	6.925	6.956	0.032
Automation 3-Digit Presort Letters	6.648	6.678	0.030
Automation 5-Digit Presort Letters	4.292	4.311	0.018
Automation 5-Digit Presort Letters (CSBCS/Man.)	4.798	4.819	0.021
Cards:			
Nonautomation Presort Cards	7.469	7.132	(0.337)
Automation MAADC Presort Cards	4.628	4.674	0.046
Automation AADC Presort Cards	3.682	3.717	0.035
Automation 3-Digit Presort Cards	3.543	3.576	0.034
Automation 5-Digit Presort Cards	2.356	2.376	0.020
Automation 5-Digit Presort Cards (CSBCS/Man.)	2.611	2.634	0.023

[A]: Order No. 741 First-Class Mail presort letters mail processing cost model estimates

[B]: Order No. 741 First-Class Mail presort letters mail processing cost model estimates with
Docket No. RM2012-2, Proposal Seventeen ISS and OSS productivity values

[C]: [B] - [A]

TABLE 2: STANDARD MAIL PRESORT LETTERS IMPACT

	[A]	[B]	[C]
PRICE CATEGORY	TOTAL MAIL PROCESSING UNIT COST (CENTS)	TOTAL MAIL PROCESSING UNIT COST (CENTS)	COST DIFFERENCE (CENTS)
Nonautomation MADC / MAADC Presort Letters	8.990	8.595	(0.395)
Nonautomation ADC / AADC Presort Letters	8.557	8.155	(0.402)
Nonautomation 3-Digit Presort Letters	20.782	20.892	0.111
Nonautomation 5-Digit Presort Letters	9.327	9.372	0.045
Automation MAADC Presort Letters	7.521	7.556	0.035
Automation AADC Presort Letters	6.085	6.112	0.027
Automation 3-Digit Presort Letters	5.798	5.823	0.025
Automation 5-Digit Presort Letters	4.014	4.029	0.015

[A]: Order No. 741 Standard Mail presort letters mail processing cost model estimates

[B]: Order No. 741 Standard Mail presort letters mail processing cost model estimates with
Docket No. RM2012-2, Proposal Seventeen ISS and OSS productivity values

[C]: [B] - [A]

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Question 7 (Proposal Seventeen)

Please explain, in detail, how the consolidation of MODS operation groups in Proposal Seventeen improves the quality, accuracy, or completeness of MODS data pursuant to 39 CFR 3050.11(a).

RESPONSE:

As noted in the Petition at page 5, the motivation for the underlying MODS operation changes is "to promote more accurate use of a streamlined set of operation numbers." Since it is costly to have employees re-clock promptly for every change of work activity that may be represented by a distinct MODS operation number, in practice there is a tradeoff between MODS data granularity and accuracy. The MODS operation changes seek to improve accuracy with a relatively minor impact on data granularity.

The consolidated MODS operation groups in Proposal Seventeen make the most complete use of the operating data that will be available on an ongoing basis. As noted in the Petition at pages 5-6, "it will not be possible to separately measure ISS, OSS, and BCS productivities" once the MODS operation changes are fully implemented.

Furthermore, as an interim matter, the Postal Service believes that the measured FY2011 ISS productivity using the ACR2010 operation grouping does not accurately represent ISS productivity given the substantial shift of ISS workhours and workload into other DBCS and DIOSS operation numbers in advance of the FY2011 phase of MODS operation discontinuances.

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Question 8 (Proposal Seventeen)

The Postal Service states, "beginning in late FY 2011, some MODS operation numbers were discontinued." Petition at 5. Please confirm that the discontinued MODS data are available for the FY 2011 Annual Compliance Report in the event the Commission does not accept or modifies the change in analytical principle requested in Proposal Seventeen.

RESPONSE:

Partly confirmed. The productivities provided in ACR2011 folder USPS-FY11-23, file YRscrub2011.xls, do not incorporate the changes requested in Proposal Seventeen and thus report productivities for the same operation groups as the ACR2010 predecessor document. However, note that the FY2011 data show that substantial workhours and workloads shifted from the ISS group (and, to a lesser extent, the OSS group) to corresponding BCS operation groups prior to the discontinuance of affected MODS operation numbers. Thus, FY2011 data using the ACR2010 groups should not be assumed to represent the same underlying operation mixes as FY2010 predecessor data, nor (as noted in the response to Question 7) should the FY2011 ISS data be assumed to be as reliable as the corresponding FY2010 data.

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Question 9 (Proposal Eighteen)

The Flat Mail Processing cost models filed as part of this docket are Prop18FCMFlatsRevised.xls (December 12, 2011) Prop18STD.xls and Prop18PERRevised.xls (December 9, 2011). Each contain tabs titled "FY11 Switches" which contain a cell identifying the "FSS stabilization Proportion".

- a. Please confirm that in the file Prop18FCMFlatsRevised.xls tab "FY11 Switches" cell e2 has a value of 20 percent. If not confirmed, please explain.
- b. Please confirm that in the file Prop18STD.xls tab "FY11 Switches" cell e2 has a value of 20 percent. If not confirmed, please explain.
- c. Please confirm that in the file Prop18PERRevised.xls tab "FY11 Switches" cell j2 has a value of 7.95 percent. If not confirmed, please explain.
- d. Please explain why the method for estimating the number of flats processed on FSS machines in the file Prop18PERRevised.xls was not used in the files Prop18FCMFlatsRevised.xls and Prop18STD.xls.
- e. Please confirm that the method used to estimate coverage factors for other Flats Processing Machines such as the AFSM 1000, which uses ODIS RPW volume by ZIP Code, was not used to estimate the coverage factor for the FSS. If confirmed, please explain why ODIS RPW volumes by zip code were not used.
- f. In file Prop18PERRevised.xls tab "FY11 Switches" cell D30 the "FSS Processed Flats Volume" is calculated by multiplying the MODS TPH (Tab "MODS Data E23" cell F94) by the "Proportion of IS Flats on Mechanized Equipment" (tab "ACR Modifications" cell 85). Please provide an explanation for using this adjustment factor.

RESPONSE:

(a-c) Confirmed.

(d) Proposal Eighteen applies proposed FSS modeling to FY 2010 data. In FY 2010, FSS deployment and use was minimal. The proportion of pieces worked on the FSS equipment in FY 2010 was effectively zero. In the development of the FSS methodology, a temporary parameter was used to enable developers to assess the sensitivity of the model to changes in the FSS

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processing proportion. The Postal Service intended to extend the Commission-accepted methodology used to estimate the proportion of flats that receive a mechanized incoming secondary sort to FSS processing, this methodology being the ratio of pieces worked (from MODS) to the number of eligible pieces (from RPW). Since the available 2010 data indicated a FSS proportion near zero, the full derivation of the FSS proportion was not included, as the Postal Service wished to assess the sensitivity of this parameter.

- (e) Confirmed. The Coverage Factor data derived from ODIS data are an estimate of the probability that a piece destines at a processing facility that is equipped with a given type of technology. They are not meant to be an estimate of the probability that a piece is worked on a given technology. They are typically used as an input into the development of the estimate of the probability that a piece is worked on the technology, but not the final estimate.

In instances such as incoming secondary and FSS processing where a facility does not process all zones in its service territory identically, additional steps are necessary to develop an estimate of the probability that a piece is worked on a piece of equipment.

In the case of FSS, the processing parameter needed to calculate the probability that a piece is worked on FSS equipment can be taken directly from the ratio of FSS processed volume to eligible volume from RPW. The Coverage Factor calculation is not necessary. Such a calculation could be performed and would give the probability that a piece destines at a facility equipped with an FSS. Since not all zones are processed on the FSS a second parameter would

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be need to estimate the probability that a piece destinating at a FSS facility is worked on the FSS. Together, these two estimates would give the parameter used in modeling FSS costs (the probability that a piece is worked on the FSS). However the necessary parameter can be taken directly from the ratio of MODS volume to eligible RPW volume

- (f) A significant amount of mail that is letter shaped, by DMM definitions, is diverted to flat sorting equipment due to the fact that digest or “fletter” shaped pieces do not process well on letter equipment. Cell N81 of “ACR Modifications” is an estimate of the proportion of pieces worked on flats equipment that are flat-shaped by DMM specifications. It is assumed that the proportion of letter shaped pieced diverted to the FSS is the same as letters diverted to other flat equipment. The application of this factor is necessary to prevent overstating the volume of flat-shaped pieces worked on FSS equipment