

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

EVOLUTIONARY NETWORK DEVELOPMENT
SERVICE CHANGES, 2006

Docket No. N2006-1

RESPONSES OF THE UNITED STATES POSTAL SERVICE
TO OFFICE OF THE CONSUMER ADVOCATE INTERROGATORIES
(OCA/USPS-34(a,c-e))

The United States Postal Service hereby files its responses to the following interrogatories of the Office of the Consumer Advocate, dated May 8, 2006: OCA/USPS-34(a, c-e). Each interrogatory is stated verbatim and followed by the response.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

Daniel J. Foucheaux
Chief Counsel, Ratemaking

Michael T. Tidwell

475 L'Enfant Plaza West, S.W.
Washington, D.C. 20260-1137
(202) 268-2998; Fax -5402
michael.t.tidwell@usps.gov
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**RESPONSE OF THE UNITED STATES POSTAL SERVICE
TO INTERROGATORY OF THE OFFICE OF THE CONSUMER ADVOCATE**

OCA/USPS-34. Please refer to the slide numbered 41 in USPS-LR-N2006-1/9, Evolutionary Network Development Technical Conference Presentation Slides. This slide, labeled "Using Size to Capture Non-Linearity," shows both nonlinear and linear forms of the cost functions used to estimate workhours as a function of pieces handled for large, medium, and small operations.

- a. Please provide the mathematical equations that describe the nonlinear cost functions for each type of processing operation, operation size and shape type.
- b. Please provide the mathematical equations that describe the linear cost functions for each type of processing operation, operation size and shape type (e.g., the slope and intercept values for each cost function).
- c. Please confirm that only the linear cost functions are used in the optimization model.
- d. Based on the linear cost functions shown in Slide 41, it appears that at low volumes, small-sized operations would be more productive than medium-sized operations, and that medium-sized operations would be more productive than large-sized ones. However, the ordering of productivities by size would be reversed for larger volumes. Please confirm that these results are due to the following characteristics of the linear cost functions used in the optimization model:
 - Large-sized operations have relatively high fixed costs and relatively low variable costs;
 - Small-sized operations have relatively low fixed costs and relatively high variable costs; and
 - Medium-sized operations have levels of fixed and variable costs lying between those for large and small sized operations.
- e. Were these cost functions developed using the Postal Service's methods for determining mail processing cost variabilities rather than the methods used by the Postal Rate Commission in several past rate cases?

RESPONSE

- a. See the Docket No. R2005-1 testimony of Postal Service witness Bozzo (USPS-T-12) at pages 42-44.
- b. Objection forthcoming.
- c. Confirmed
- d. The phrase "small, medium, and large operations" refers to the fact that the linear approximations match the productivities implied by the Postal Services cost equations for small, medium, and large operations. Like the

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RESPONSE to OCA/USPS-34 (continued):

Postal Service's cost equations, the marginal cost solution decreases as as TPH increases. The "fixed" component is essentially the intercept allowing one to achieve the linear approximation of the solution to the non-linear equation.

e. Yes