



March 20, 2008

MICHAEL S. FUREY
NORTHERN VIRGINIA DISTRICT MANAGER

SUBJECT: Audit Report – Northern Virginia District Energy Management Savings Opportunities (Report Number DA-AR-08-003)

This report presents the results of our self-initiated audit of Northern Virginia District energy management savings opportunities (Project Number 08YG002DA000). Our objective was to evaluate the Northern Virginia District's (the District) efforts to reduce electricity consumption and costs. The current U.S. Postal Service energy management program focuses on facilities of more than 100,000 square feet. We reviewed the District's efforts at facilities that were between 10,000 and 100,000 square feet. See [Appendix A](#) for additional information on this audit.

Energy Savings Opportunities Exist at Smaller Sites

Federal laws¹ require the Postal Service to reduce energy consumption at facilities to the maximum extent practical. However, the Postal Service has not applied the District's energy management program to facilities less than 100,000 square feet. Our audit revealed several low- or no-cost opportunities to improve energy efficiency at these smaller sites including conducting energy walk-through inspections at the sites. Smaller facilities in the District did not have energy management plans, primarily because the District, following national strategic direction, focused its energy savings efforts on larger facilities. As a result, the District has not completely seized opportunities to reduce energy consumption and lower energy costs. Further, insufficient internal controls over the payment of the District's electricity bills resulted in assets at risk of approximately \$2 million for calendar year 2007. See [Appendix B](#) for our detailed analysis of this issue.

For facilities less than 100,000 square feet within the District, we recommend the Northern Virginia District Manager:

1. Establish energy awareness programs.
2. Explore the use of low- and no-cost energy conservation initiatives, such as lighting sensors and more energy efficient thermostat settings.

¹ The Energy Policy Act (EPACT) of 1992 and the Energy Policy Act of 2005 require the Postal Service to lower its energy consumption to meet specific goals. The Energy Independence and Security Act of 2007 expanded these requirements.

3. Direct applicable personnel to do periodic walk-through inspections at facilities to measure compliance with Energy Management Program initiatives.
4. Direct applicable personnel to review and monitor energy bills to ensure accuracy and review the adequacy of rate plans.

Management's Comments

Management agreed with our findings and recommendations and is taking the following actions:

- Recommendation 1 – The Northern Virginia District has named the Finance Manager as the Energy Coordinator who will provide energy awareness information to its field sites by March 31, 2008.
- Recommendation 2 – The District intends to undertake low- or no-cost energy initiatives beginning in March 2008, and will explore the use of a modified self-checklist for walk-through inspections.
- Recommendation 3 – The District will require local site managers to perform walk-through inspections by June 30, 2008, and submit certificates of completion.
- Recommendation 4 – The Northern Virginia District will address the importance of reviewing and approving electricity bills with postmasters by March 31, 2008, and follow up with specific responsibilities for invoice reviewers.

Management partially agreed with the non-monetary impact of our findings. They indicated that three of 12 sites did review their bills and, as such, should reduce the impact presented accordingly.

We have included management's comments, in their entirety, in [Appendix E](#).

Evaluation of Management's Comments

Management's comments are responsive to the recommendations and the corrective actions should resolve the issues identified in the report. We agree with management's assertion regarding the non-monetary impact and have revised our assets at risk figures accordingly.

The U.S. Postal Service Office of Inspector General (OIG) considers all the recommendations significant and, therefore, requires OIG concurrence before closure. Consequently, the OIG requests written confirmation when corrective actions are completed. These recommendations should not be closed in the follow-up tracking

system until the OIG provides written confirmation that the recommendations can be closed.

We appreciate the cooperation and courtesies provided by your staff. If you have any questions or need additional information, please contact Miguel A. Castillo, Director, Engineering, or me at (703) 248-2100.

E-Signed by Darrell E. Benjamin, 
VERIFY authenticity with ApproveIt

Darrell E. Benjamin, Jr.
Deputy Assistant Inspector General
for Support Operations

Attachments

cc: Tom Samra
Carolyn Cole
Katherine S. Banks

APPENDIX A: ADDITIONAL INFORMATION

BACKGROUND

The Postal Service has over 34,000 facilities nationwide. During fiscal years (FY) 2006 and 2007, the Postal Service expended more than \$600 million in utility costs to support operations at these facilities. Ninety-eight percent of utility costs are for electricity, gas, and oil, with electricity alone accounting for approximately 80 percent of the total costs. The major contributors to electricity costs are heating, ventilation, air conditioning, lighting, and equipment.

In the Northern Virginia District, there are 127 facilities of less than 100,000 square feet. In FY 2007, payments to electricity providers for these facilities totaled approximately \$2 million, or 73 percent of the District's total electricity costs.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to evaluate the Northern Virginia District's efforts to reduce electricity consumption and costs. To accomplish our objective, we selected 12 facilities from the Northern Virginia District to determine their commitment to energy conservation programs. The 12 facilities randomly selected were from the universe of facilities of between 10,000 and 100,000 square feet. These facilities are Postal Service retail or mail processing locations.

We conducted this performance audit from November 2007 through March 2008 in accordance with generally accepted government auditing standards and included such tests of internal controls as we considered necessary under the circumstances. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. We reviewed policies and procedures for internal controls and discussed our observations and conclusions with management officials on February 19, 2008. We included their comments where appropriate.

We extracted data from the Electronic Data Warehouse, E-Buy, and the Facilities Management System files. Previous OIG reports related to these systems did not reveal weaknesses that would affect our audit.

PRIOR AUDIT COVERAGE

We did not identify any prior audits or reviews related to the objective of this audit.

APPENDIX B: DETAILED ANALYSIS

Energy Savings Opportunities Exist Within the Northern Virginia District

The Northern Virginia District does not have an energy management program in place for facilities of less than 100,000 square feet. Our audit revealed several low- or no-cost opportunities to conserve energy and improve efficiency at these smaller facilities. We discuss our observations below and detail them in [Appendix D](#).

- **Energy awareness program.** The 12 facilities visited did not have energy awareness programs. Energy awareness programs teach energy users to eliminate waste without diminishing their quality of life. Awareness encourages users to develop simple, cost-effective energy habits such as extinguishing lights when spaces are unoccupied. Energy awareness programs also help ensure that existing energy systems are used to maximum efficiency.
- **Motion sensors and timers.** Eight of 12 facilities visited did not use motion sensors to minimize electricity consumption and costs. Motion sensors are very effective in areas that are used occasionally, such as copying rooms, conference rooms, and restrooms.
- **Lights in use when space was unoccupied.** Five of 12 facilities did not extinguish lights when space was unoccupied. Extinguishing lights in an area when employees have completed an operation or task, or when the day's operations have been completed, is clearly more energy efficient than leaving them on. In addition, exterior lights on outdoor docks were left on during the daytime at two facilities. Postal Service facilities could use a timer to turn exterior lights on at sunset and off about an hour after sunrise. Photocells can perform this task automatically.
- **Use of alternate lighting.** Ten of 12 facilities did not use alternate lighting, which involves reducing the number of light bulbs and fixtures in use within a facility to conserve electricity.
- **Monitoring thermostat settings.** Nine of 12 facilities did not monitor heating and cooling settings. The Postal Service recommends that they be set at 65 degrees Fahrenheit (°F) in the winter and 78°F in the summer.
- **Review of energy bills.** The Northern Virginia District uses e-Buy to pay utility bills. According to the Postal Service utility payment policy, when a utility company sends an electronic data file to accounting for payment, post offices may perform a post-payment certification using the web site provided. Alternatively, the post office may verify individual utility bills and process payments locally using the purchase card. If a payment exceeds \$10,000, the

post office is to prepare an authorization for payment and submit it to accounting. During calendar year 2007, the Northern Virginia District paid over \$2.7 million for electricity usage, but did not adequately validate the electricity bills. In nine of 12 district sites analyzed, personnel did not review the energy bills before authorizing payment and none reviewed the savings potential for using other rate plans. In two instances, sites received bills for electricity usage associated with meters that could not be located. In addition, other rate plans, such as time of use plans, were publicized by the electricity provider but not evaluated by district personnel.

As summarized in [Appendix C](#), federal energy policies require the Postal Service to reduce consumption at facilities to the maximum extent practical. Postal Service Handbook AS-558, *Facility Energy Management Guide*, provides guidance for realizing many of the energy opportunities identified, including energy awareness, lighting practices, and temperature settings.

Smaller facilities in the Northern Virginia District did not have energy management plans because the District focused its energy saving efforts on facilities with space exceeding 100,000 square feet. Furthermore, none of the sites conducted energy walk-through inspections, as described by the Postal Service's energy guide,² to identify these potential savings. As a result, the District has opportunities to reduce energy consumption in keeping with federal mandates and to lower energy costs. Further, inadequate internal controls over the payment of Northern Virginia District electricity bills resulted in assets at risk of approximately \$2 million, which we will report in our *Semiannual Report to Congress*.

² Handbook AS-558, *Facility Energy Management Guide*, Chapter 8, Section 2.

APPENDIX C: SUMMARY – APPLICABLE ENERGY MANAGEMENT LEGISLATION

The Energy Policy Act (EPACT) of 1992:

- Made EPACT applicable by specifically including the Postal Service.
- Called for a 20 percent energy reduction at facilities through FY 2000.
- Section 166 required the Postal Service to follow the same standards as other federal agencies, as found in Section 543 of the National Energy Conservation Policy Act (NECPA).
- Required energy initiatives to be implemented to the maximum extent practical.

The Energy Policy Act of 2005:

- Amended many provisions of building energy requirements.
- Set energy reduction goals at 20 percent between 2006 and 2015.

The Energy Independence and Security Act of 2007:

- Section 323 set energy efficiency requirements and use of energy-efficient lighting fixtures.
- Section 431 expanded energy reduction goals to 30 percent between 2006 and 2015.
- Section 432 amended NECPA Section 543 to require each federal agency to designate a federal energy manager responsible for reducing energy use at each facility included in a group of facilities that use 75 percent of the agency's energy. Each calendar year, the energy manager shall complete a comprehensive energy and water evaluation study for 25 percent of the facilities within the 75-percent energy usage group. The energy manager will use a web-based certification process established by the Department of Energy for the facilities identified.

APPENDIX D: SUMMARY OF NORTHERN VIRGINIA DISTRICT SITE RESULTS

<i>Post Office Sites</i>	<i>Motion Sensors</i>		<i>Awareness Program</i>		<i>Electricity Bill Monitoring</i>		<i>Thermostat Monitoring</i>		<i>Alternate Lighting</i>		<i>Lights Left On in Unoccupied Spaces</i>	
	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>No</i>
<i>Alexandria</i>	X			X		X		X		X		X
<i>Arlington</i>	X			X	X			X		X	X	
<i>Annandale</i>		X		X		X		X		X	X	
<i>Falls Church</i>		X		X		X		X	X		X	
<i>Herndon</i>	X			X		X		X		X		X
[REDACTED]		X		X		X		X		X		X
<i>Leesburg</i>		X		X		X	X			X		X
<i>McLean</i>		X		X				X		X		X
<i>Purcellville</i>		X		X	X		X					X
<i>Sterling</i>		X		X	X		X		X		X	
<i>Vienna</i>		X		X		X		X		X	X	
<i>Woodbridge</i>	X			X		X		X		X		X
Totals	4	8	0	12	3	9	3	9	2	10	5	7

APPENDIX E. MANAGEMENT'S COMMENTS

DISTRICT MANAGER
CUSTOMER SERVICE AND SALES
NORTHERN VIRGINIA DISTRICT



March 17, 2008

To: Johnson John, Acting Director, Audit Operations
Office of Inspector General

Re: Draft Audit Report –Northern Virginia District Energy Management Savings Opportunities
(Report Number DA-AR-08-DRAFT)

Following are the recommendations and responses to the Energy Management Savings Opportunities Audit for the Northern Virginia District:

Recommendation 1. Establish energy awareness programs.

Response: The Northern Virginia District agrees that the establishment of energy awareness programs will provide each of our field offices information they have been lacking regarding energy saving opportunities. In order to accomplish this, I have named the District Finance Manager as our District Energy Management Coordinator. The Coordinator will contact District Postmasters through an e-mail message which will introduce them to the energy awareness program, provide some immediate no-cost saving suggestions, and request each office provide the name of their local energy management contact. The initial e-mail contact will be sent by March 31, 2008. An informative series of e-mails will provide more in-depth information regarding cost-effective energy habits, the monitoring and payment of electricity bills, energy saving responsibilities, and required procedures as outlined in the AS-558 will be sent to the local energy management contact with a copy to the Postmaster.

Recommendation 2. Explore the use of low- and no-cost energy conservation initiatives, such as, lighting sensors, and thermostat settings.

Response: The Northern Virginia District agrees with this recommendation and intends to encourage the use of low- and no-cost conservation initiatives in our field offices. Where these initiatives can be accomplished at no-cost to the office, the district will direct the monitoring of thermostats, the use of alternative lighting, and the extinguishing of lights in unused areas to the maximum extent practical. This will be accomplished through a series of informational e-mails which will start prior to March 31, 2008. Additionally, the Northern Virginia District will explore the use of a modified self check list during required periodic walk- through inspections, and/or during reviews performed by the District Financial Control and Support function.

Recommendation 3. Direct applicable personnel to perform periodic walk-through inspections at facilities to measure compliance with energy management program initiatives.

Response: The Northern Virginia District agrees that periodic walk-through inspections at our facilities will encourage the compliance of directed energy saving initiatives. Handbook AS-558 was unspecific as to the frequency of these inspections, therefore we will require local management to perform an initial walk-through inspection prior to the end of Quarter 3 FY08. Local management will be required to submit certification that the inspection was performed. The frequency of subsequent walk-through inspections will be determined and published by the District Manager or his designee.

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Recommendation 4. Direct applicable personnel to review and monitor energy bills to ensure accuracy and to review the adequacy of rate plans.

Response: The Northern Virginia District agrees that the review of electricity bills will ensure that we are being charged the correct amount for usage and are maximizing our opportunity for savings by requesting the most economical rates available. The importance of reviewing electricity bills will be addressed in the first of the series of e-mail correspondence to the Postmasters which will be sent prior to the close of Quarter 2 FY08. Upon determination of the local office contact, a more in-depth e-mail will be sent which will provide detailed invoice information and specific responsibilities of the invoice reviewer.

Non-monetary impact: Inadequate internal controls over the payment of Northern Virginia District electricity bills resulted in assets at risk of approximately \$2.7 million.

Response: The Northern Virginia District agrees that assets were at risk as a result of the lack of internal controls in monitoring the electricity bills. We do not agree that the risk is \$2.7 million, the same amount which was paid for electricity during CY 2007, as stated in Appendix B: Detailed Analysis. We feel that the non-monetary impact of \$2.7 million should be reduced based on Appendix D: Site Results, which indicated that 3 out of 12 offices did monitor their electricity bills.

If you have any further questions, please do not hesitate to contact me.

Sincerely,



MS

Michael S. Furey

cc: Laura Naccarato, Manager, Finance