



Memorandum from the Office of the Inspector General

November 20, 2008

John E. Long, Jr., WT 7B-K

REQUEST FOR FINAL ACTION – AUDIT 2008-11942 – TVA TELEWORK INITIATIVES

Attached is the subject final report for your review and final action. Your written comments, which addressed your management decision and actions planned or taken, have been included in the report. Please notify us within one year from the date of this memorandum when final action is complete.

If you have any questions, please contact Lisa H. Hammer, Project Manager, at (865) 633-7342 or John H. Barrow, Director (Acting), Financial and Operational Audits, at (865) 633-7323. We appreciate the courtesy and cooperation received from your staff during the audit.

Robert E. Martin
Assistant Inspector General
(Audits and Inspections)
ET 3C-K

LHH:JP
Attachment
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OIG File No. 2008-11942



Office of the Inspector General

Audit Report

To the Chief Administrative Officer
and Executive Vice President,
Administrative Services

TVA TELEWORK INITIATIVES

Project Manager
Lisa H. Hammer

Audit 2008-11942
November 20, 2008



TVA Office of the Inspector General

November 2008

Audit 2008-11942 TVA Telework Initiatives

What the OIG Found

We reviewed TVA's efforts to implement telework to date as well as any planned telework initiatives. Our review determined:

- Business Practice 20, Off-site Use of Business Equipment (BP20), provides a framework for telework; however, we found little evidence of compliance with the policy, especially as related to required training and method of approval.
- Pockets of teleworkers exist throughout TVA. However, TVA has no system for tracking individuals who telework and the extent to which they telework.
- Employees are approved to telework by being granted remote access to TVA systems instead of following the BP 20 approval process.

We did not identify any planned telework initiatives. Should the number of concurrent remote users increase, TVA may need to increase its remote access capabilities.

We also reviewed TVA's COOP and Pandemic plan and determined both adequately included the use of telework in those programs. However, the COOP does not require essential employees to take their laptop computers home in the evenings to ensure continuity of operations in the event they are unable to move to the alternative location during an emergency.

In addition, telework is being considered by Facilities Management in their space-reduction plans. However, any decisions made would require buy-in from management.



Why the OIG Did This Review

Telework has gained widespread attention over the past decade in both the public and private sectors with a number of potential benefits to employers, employees, and society. These benefits include reducing traffic congestion and pollution, improving recruitment and retention of employees, and increased productivity. Employee benefits from teleworking include reduced commuting time; lowered costs of transportation, parking, food, and wardrobe; removal of barriers for those with disabilities; and improvement in the quality of work life and morale. Congress has enacted several laws addressing telework for federal employees. A 2000 act mandated telework and required each executive agency to establish a policy for eligible employees to participate in telecommuting to the maximum extent possible. Recently, the U.S. House of Representatives passed H.R. 4106, Telework Improvements Act of 2008. If this Act becomes law, it would require executive agencies to develop a telework program that allows employees to telework at least 20 percent of the hours worked in every 2 administrative workweeks.

This audit assessed TVA's efforts to implement telework to date as well as any planned telework initiatives.

What the OIG Recommends

We recommend the Chief Administrative Officer and Executive Vice President (CAO and EVP), Administrative Services:

- Work with other TVA organizations to perform an assessment to determine which jobs and functions in TVA are conducive to telework.
- Consider a pilot program that would inform future decisions about telework and identify ways to use telework to facilitate Continuity of Operations Plan (COOP) planning and responding to emergency situations such as pandemics or natural disasters.
- Implement a telework policy that provides (1) a method for approving employees to telework, (2) appropriate training to supervisors and all employees authorized to telework, (3) a tracking system for individuals who telework, and (4) effective communication of TVA's telework policy to TVA employees.
- Consider designating a Telework Managing Officer.
- Consider requiring essential employees to take their laptop computers home each evening in the event an emergency occurs and they are unable to move to the alternative location.

The CAO and EVP, Administrative Services, provided comments on a draft of this report. The CAO and EVP, Administrative Services, agreed to work with other TVA organizations to determine which jobs and functions in TVA are conducive to telework. Upon completion of that assessment, the CAO and EVP, Administrative Services, will take appropriate actions regarding our other recommendations.

For more information, contact Lisa H. Hammer, Project Manager, at (865) 633-7342 or John H. Barrow, Director (Acting), Financial and Operational Audits, at (865) 633-7323.

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MEMORANDUM DATED NOVEMBER 14, 2008, FROM JOHN E. LONG TO ROBERT E. MARTIN

EXECUTIVE SUMMARY

Telework has gained widespread attention over the past decade in both the public and private sectors with a number of potential benefits to employers, employees, and society. These benefits include reducing traffic congestion and pollution, improving recruitment and retention of employees, increasing productivity, and reducing the need for office space. Employees also can realize benefits from teleworking including reduced commuting time; lowered costs in areas such as transportation, parking, food, and wardrobe; removal of barriers for those with disabilities who want to be part of the workforce; and improvement in the quality of work life and morale resulting from the opportunity to better balance work and family demands. In recent years, Congress has enacted several laws addressing telework for federal employees. Another act was recently passed by the House of Representatives.

We reviewed TVA's efforts to implement telework to date as well as any planned telework initiatives. Our review determined:

- Business Practice 20, Off-site Use of Business Equipment (BP 20), provides a framework for telework; however, we found little evidence of compliance with the policy, especially as related to required training and method of approval.
- Pockets of teleworkers exist throughout TVA. However, TVA has no system for tracking individuals who telework and the extent to which they telework.
- Employees are approved to telework by being granted remote access to TVA systems instead of following the BP 20 approval process.

We did not identify any planned telework initiatives. Should the number of concurrent remote users increase, TVA may need to increase its remote access capabilities.

We also reviewed TVA's Continuity of Operations Plan (COOP) and Pandemic plan and determined both adequately included the use of telework in those programs. However, the COOP does not require essential employees to take their laptop computers home in the evenings to ensure continuity of operations in the event they are unable to move to the alternative location during an emergency.

In addition, telework is being considered by Facilities Management in their space-reduction plans. However, any decisions made would require buy-in from management.

We recommend the Chief Administrative Officer and Executive Vice President (CAO and EVP), Administrative Services:

- Work with other TVA organizations to determine which jobs and functions in TVA are conducive to telework.
- Consider a pilot program that would inform future decisions about telework and identify ways to use telework to facilitate COOP planning and responding to emergency situations such as pandemics or natural disasters.
- Implement a telework policy that provides (1) a method for approving employees to telework, (2) appropriate training to supervisors and all employees authorized to telework, (3) a tracking system for individuals who telework, and (4) effective communication of TVA's telework policy to TVA employees.
- Consider designating a Telework Managing Officer.
- Consider requiring that essential employees take their laptop computers home at the end of their workday in the event an emergency occurs and they are unable to move to the alternative location.

The CAO and EVP, Administrative Services, provided comments on a draft of this report (see Appendix). The CAO and EVP, Administrative Services, agreed to work with other TVA organizations to determine which jobs and functions in TVA are conducive to telework. Upon completion of that assessment, the CAO and EVP, Administrative Services, will take appropriate actions regarding our other recommendations.

BACKGROUND

Telework has gained widespread attention over the past decade in both the public and private sectors with a number of potential benefits to employers, employees, and society. These benefits include reducing traffic congestion and pollution, improving recruitment and retention of employees, increasing productivity, and reducing the need for office space. Employees also can realize benefits from teleworking including reduced commuting time; lowered costs in areas such as transportation, parking, food, and wardrobe; removal of barriers for those with disabilities who want to be part of the workforce; and improvement in the quality of work life and morale resulting from the opportunity to better balance work and family demands.

In October 2000, Congress enacted the Department of Transportation and Related Agencies Appropriations Act, 2001, Public Law 106-346. Section 359 of this Law states "each executive agency shall establish a policy under which eligible employees of the agency may participate in telecommuting to the maximum extent possible without diminished employee performance." TVA was not required to comply with this Law since TVA does not receive appropriated funds. However, in March 2001, TVA issued Business Practice 20, Off-site Use of Business Equipment (BP 20), which established authorization for employees' use of TVA equipment at an employee's home or at a TVA-approved site. Further legislation followed in 2004 with directives to the Departments of Commerce, State, the Judiciary, and the Small Business Administration to increase telework participation by specified amounts.

Recently, the U.S. House of Representatives passed H.R. 4106, Telework Improvements Act of 2008. If passed by the Senate and signed into law, this Act would require executive agencies to develop a telework program that allows employees to telework at least 20 percent of the hours worked in every 2 administrative workweeks.¹ The Act also states that the head of each agency "shall ensure that (1) to the maximum extent practicable, telework is incorporated into the continuity of operations planning of such agency; and (2) mission critical personnel, as determined by the head of such agency, are equipped to telework in time of a catastrophe."

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to assess TVA's efforts to implement telework to date as well as any planned telework initiatives. To achieve our objective, we:

¹ H.R. 4106 was passed by the House in June 2008 and is expected to be considered by the Senate in its upcoming legislative session.

- Reviewed relevant policies and procedures related to telework including TVA's (1) BP 20, (2) Continuity of Operations Plan (COOP), and (3) Pandemic plan;
- Interviewed personnel responsible for the COOP and Pandemic plan to determine the extent telework is included in those plans;
- Interviewed Human Resources (HR) personnel to determine the extent of telework within their respective organizations, as well as compliance with telework policies;
- Interviewed Facilities Management (FM) personnel to determine the potential effects of telework on real estate space; and
- Obtained information related to remote access via the Virtual Privacy Network (VPN) from Information Services' (IS) personnel, as well as any requirements needed to increase the current VPN capacity.

We conducted this performance audit in accordance with generally accepted government auditing standards. 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 objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. In performing this audit, nothing came to our attention that indicated noncompliance with applicable laws and regulations.

FINDINGS

We found (1) little evidence of compliance with TVA's current telework policy, (2) pockets of teleworkers within TVA, but no system of tracking those individuals who telework, and (3) approval of employees to telework by being granted remote access to TVA systems instead of following the BP 20 approval process. In addition, we did not identify any future telework initiatives and determined that TVA's COOP and Pandemic plans adequately included the use of telework but did not require essential employees to take their laptop computers home each evening.

CURRENT EFFORTS TO IMPLEMENT TELEWORK

We assessed TVA's current efforts to implement telework and found limited telework occurring at TVA. Although there are currently no federal requirements for TVA employees to telework, TVA's BP 20 provides for authorization of employees to use TVA equipment at their homes or other non-TVA locations. However, we found:

- Little evidence of compliance with the policy, especially as related to required training and method of approval.
- Pockets of teleworkers exist throughout TVA. However, TVA has no system for tracking the extent to which telework is occurring.
- Employees are approved to telework by being granted remote access to TVA systems instead of following the BP 20 approval process.

Compliance With TVA's Telework Policy

TVA's current policy related to telework is BP 20. Although the term *telework* is not used within the policy, BP 20 defines off-site work as "official TVA work that is performed in an employee's home or at a TVA-approved site such as a special project site." According to the policy, TVA provides computers and other equipment to employees for business purposes. Employees must have business needs to complete work assignments off-site, to conduct work while in travel status, to perform work off-site while recovering from illnesses or medical treatments, or other needs that TVA identifies.

BP 20 states that, to be eligible for off-site use of business equipment, the supervisor must determine the need for and duration of the off-site assignment and submit written justification for approval to the appropriate organizational Business Council member. In addition, the policy requires that employees approved to work off-site attend training sessions to receive guidance on TVA's expectations and requirements. Requests for training are to be submitted to Corporate HR, HR Information Services.

We requested information related to the training and approvals as required by BP 20 from TVA's HR Service Managers and found the following:

- Environmental Stewardship and Policy's Environmental Audit (EA) auditors have teleworked since 2004 when a cross-organizational team including members from FM, IS, and the Office of the General Counsel (OGC) was formed to develop an alternative workplace strategy for the EA staff due to their frequent travel. As part of the program, the auditors each signed an agreement that was approved by their supervisor and HR consultant. The agreement provided guidance related to TVA's expectations including establishing core business hours and requiring the employee to provide a dedicated workspace, cell phone and high-speed internet connection, and performance standards.

No other HR Service Manager was aware of any approvals or training. We also did not identify any assessment of functions or positions that would be conducive to teleworking, other than the EA staff.

Current Teleworkers in TVA

Currently TVA does not maintain a tracking system of employees who telework. To further determine current telework efforts, we requested the HR Service Managers and selected HR consultants provide any information related to teleworkers in their organizations. The EA staff were the only employees we identified who telework on a regular basis. HR personnel provided information related to the following employees who occasionally telework:

- A part-time employee in River Operations.
- River Operations employees who conduct hydrothermal forecasting after normal business hours.
- Technicians in the IT Command Center for continuity of operations. Additionally, the staff is allotted 15 days per quarter to telework.

No other information related to individuals teleworking was provided. However, one of the Service Managers stated that some telework is done in their organization when in travel status but did not know whether BP 20 would have applied to those situations.

Remote Access to TVA Systems

We obtained and reviewed a listing of weekly remote² access to TVA systems via the VPN. Currently, remote access is provided to TVA employees based on their manager's approval as required in TVA's Standard Programs and Processes (SPP) 12.3, Mobile and Remote Access to TVA's Information Resources. SPP 12.3 "applies to TVA employees, contractors, grantees, and employees of other federal agencies, state and local governments, business partners, and other organizations and individuals who access TVA's network and/or information systems from mobile and remote systems or devices."

For the week of July 25, 2008, there were 2,336 active VPN accounts with 1,140 unique users, which exceed the number of individuals identified by HR personnel above. Based on this information, managers have essentially approved the VPN users for telework through SPP 12.3. However, the guidance and expectations that were requirements of BP 20 are not included in this SPP.

FUTURE/PLANNED INITIATIVES

We did not identify any future or planned initiatives with regard to telework. However, recent legislation passed by the U.S. House of Representatives would require TVA to implement specific telework initiatives if the bill passes the Senate and is signed into law. In addition, an increase in the number of concurrent remote users could require TVA to increase its VPN capabilities.

² Standard Programs and Processes 12.3 defines remote as "a geographical location wherein sufficient distance exists as to prohibit, in any way, physical corporate network connectivity via contiguous cable or wire when used in conjunction with computing and networking technology."

H.R. 4106, Telework Improvements Act of 2008

In June 2008, the House of Representatives passed H.R. 4106, Telework Improvements Act of 2008. The purpose of the Act is "To improve teleworking in executive agencies by developing a telework program that allows employees to telework at least 20 percent of the hours worked in every 2 administrative workweeks, and for other purposes."

Under the Act, the head of each agency is required to establish a telework policy ensuring that those employees who are authorized to telework can do so to the maximum extent possible without diminishing employee performance or agency operations. The Act further states that not everyone must be authorized or required to telework. In addition, appropriate training must be provided to supervisors and all employees who are authorized to telework.

Each agency may appoint an officer to be known as the "Telework Managing Officer" whose duties and responsibilities include (1) advising the head of the agency on teleworking; (2) being a telework resource for supervisors, managers, and employees; (3) ensuring the agency's teleworking policy and programs are effectively communicated; (4) developing and administering a tracking system for compliance with government-wide telework reporting requirements; and (5) establishing a system for receiving feedback from agency employees on the agency's telework policy.

According to TVA's OGC, TVA will be required to meet the requirements of the Act if it becomes law. In our view, the key requirements contained in H.R. 4106 constitute good business practices regardless of whether it ultimately becomes law that TVA is subject to.

TVA's current infrastructure can support 500 concurrent users without incurring additional costs. (The maximum number of concurrent connections has been 160.) However, TVA could increase the number of concurrent users to 2,000³ with an upfront cost of \$100,000 and annual costs of \$8,000; an increase to 4,000 would require an additional \$170,000 in upfront costs and additional annual costs of \$8,000.

OTHER INITIATIVES RELATED TO TELEWORK

We assessed whether TVA's COOP and Pandemic plan adequately included the use of telework in those programs and found that both plans provide for essential employees to move to alternate TVA locations, although the Pandemic plan has a greater provision for teleworking at home. However, the COOP does not require essential employees to take their laptop computers home each evening in the event an emergency occurs and they are unable to move to the alternative location.

³ According to the General Manager, IT Infrastructure, an increase in concurrent usage exceeding 2,000 users would also require a Digital Signal 3 line that increases Internet capabilities. This would add an additional \$7,200 per year in costs.

We also noted that FM is considering telework in their space-reduction plans. However, any decisions made would require buy-in from management.

Continuity of Operations Plan

The Federal Emergency Management Agency 2004 version of Federal Preparedness Circular (FPC) 65, which provides guidance to the federal executive branch on developing contingency plans for performing essential functions during any emergency, instructs agencies to consider telework in their COOP plans.

TVA's draft COOP⁴ provides "for the continued performance of mission essential functions under all circumstances, particularly any emergency or situation that may disrupt normal operations" and "for integration and coordination with other governmental and non-governmental organizations as appropriate during all-hazards emergencies or other situations that may disrupt operations." While the Pandemic plan addresses operations under a global-disease outbreak, the COOP is for any disruption to normal operations.

TVA's COOP assumes that a threat or emergency condition may require the relocation of employees and operations to alternate sites and that the sites and employees at those sites would be available to support operations. TVA's COOP does not specifically address working from non-TVA locations. However, each strategic business unit is responsible for developing their own COOP plan, ensuring that the plan encompasses all business unit-identified essential functions regardless of location.

We judgmentally selected the COOP plans for the Chief Financial Officer and Procurement and reviewed each for any telework requirements. Both organizational plans included identification of essential functions and plans for moving to alternative TVA locations, and Procurement's plan included telecommuting for those who can. However, there is no directive for essential employees to take their laptop computers home each day in the event an emergency occurs after hours, and they cannot relocate to the designated TVA locations.

Pandemic Plan

TVA's current Pandemic plan allows TVA to maintain essential functions prior to, during, and after a pandemic — a global disease outbreak in humans. The plan supplements traditional all-hazard COOP planning of FPC 65 by addressing those challenges specific to a pandemic. TVA's pandemic planning criteria includes (1) identification of essential functions and essential employees, (2) the ability to work from home on a limited basis, (3) stockpiling of critical supplies and materials for essential functions, (4) social distancing measures, and (5) increased personal hygiene, health screening, and sanitation measures.

⁴ As of the date of this report, the COOP had not been finalized and approved by management.

According to the plan, during periods of maximum disruption, telework needs will be based on an assessment of essential functions and will only be permitted with appropriate supervisory approval in accordance with BP 20. Telework from home may be enacted for specific locations and for specified durations during the pandemic.

In August 2007, the Pandemic team conducted a telework drill that consisted of approximately 140 participants. According to the Manager, Health Services, HR, the drills were conducted to determine how work groups could function from remote locations in the event of a pandemic. Upon completion of the drill, the Pandemic team surveyed the participants and their supervisors to assess the effectiveness of the drill and identify any areas for improvement. The survey found that the drill was effective, and problems were limited to the inability to print from remote locations, speed of the Internet connection, and VPN issues due to first-time use.

Telework and Reduction of Office Space

In 2007, FM conducted a teleworking study of TVA to see whether office space costs could be reduced by implementing telework. Results of the study noted that Chattanooga, with approximately 1.18 million square feet in the Chattanooga Office Complex (COC), was the most important corporate office location to consider for teleworking because, at the time of the study, negotiations were underway to either construct a build-to-suit at Chickamauga or remain downtown in a smaller space in the COC. The study noted that Knoxville, Nashville, and Muscle Shoals had excess space with little opportunity to reduce the unused square footage.

As part of FM's study, a survey was conducted which revealed managers would not consider many jobs in the TVA corporate areas appropriate for teleworking. Many managers had reservations about telework, such as a fear of losing control over employees as well as concerns about productivity and security.

Currently, FM personnel are again looking at reducing office space through consolidation of Chattanooga space. According to the Manager, Space Management Planning and Design (SMP&D), FM has frequently considered telework and whether it could drive down real estate costs. However, the greatest challenges have been lack of clear policy related to telework, OGC concerns about liability, and TVA supervisor and employee attitudes toward telework. The Manager, SMP&D, stated that teleworking would have little impact on real estate costs because a reduction of dedicated space for individual employees would be offset by reconfigured collaborative space.

RECOMMENDATIONS

We recommend the Chief Administrative Officer and Executive Vice President (CAO and EVP), Administrative Services:

- Work with other TVA organizations to perform an assessment to determine which jobs and functions in TVA are conducive to telework.
- Consider a pilot program that would inform future decisions about telework and identify ways to use telework to facilitate COOP planning and responding to emergency situations such as pandemics or natural disasters.
- Develop a telework policy that provides for:
 - A method for approving employees to telework.
 - Appropriate training to supervisors and all employees authorized to telework.
 - A tracking system for individuals who telework.
 - Effective communication of TVA's telework policy to TVA employees.
- Consider designating a Telework Managing Officer.
- Consider requiring that essential employees take their laptop computers home at the end of their workday in the event an emergency occurs and they are unable to move to the alternative location.

The CAO and EVP, Administrative Services, provided comments on a draft of this report (see Appendix) and agreed to work with other TVA organizations to determine which jobs and functions in TVA are conducive to telework. Upon completion of that assessment, the CAO and EVP, Administrative Services, will take appropriate actions regarding our other recommendations.

November 14, 2008

Robert E. Martin, ET 3C-K

REQUEST FOR COMMENTS - DRAFT AUDIT 2008-11942 - TVA TELEWORK
INITIATIVES

Thank you for your recommendations regarding TVA Telework Initiatives. As you recommended, we plan to work with the other TVA organizations to perform an assessment to determine which jobs and functions in TVA are conducive to telework. After completing the assessment, we will determine the appropriate action with regard to the other OIG recommendations. We plan to complete the assessment no later than March 31, 2009.

If you have any questions, please contact Libby M. Nickle, 632-6511.



John E. Long
Chief Administrative Officer and
Executive Vice President
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