



**Memorandum from the Office of the Inspector General**

May 24, 2010

Robert J. Fisher, LP 3K-C

**REQUEST FOR FINAL ACTION – AUDIT 2009-12291-03 – REVIEW OF POSTPONED  
AND CANCELLED CAPITAL PROJECTS – FOSSIL GENERATION**

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 Amy R. Rush, Senior Auditor, at (865) 633-7361 or Lisa H. Hammer, Director, Financial and Operational Audits, at (865) 633-7342. We appreciate the courtesy and cooperation received from your staff during the audit.

*Robert E. Martin*

Robert E. Martin  
Assistant Inspector General  
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OIG File No. 2009-12291-03



Office of the Inspector General

# *Audit Report*

To the Senior Vice President,  
Fossil Generation

# **REVIEW OF POSTPONED AND CANCELLED CAPITAL PROJECTS – FOSSIL GENERATION**

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Audit Team  
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Audit 2009-12291-03  
May 24, 2010

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## **EXECUTIVE SUMMARY**

As part of our annual audit plan, we reviewed the process for postponing and cancelling fossil capital projects. Our audit objective was to determine whether fiscal years 2007 and 2008 project postponements and cancellations were properly approved, effectively communicated, and monitored to prevent inappropriate charges.

Our review specifically focused on the processes for Nuclear Power Group, Power System Operations, Fossil Generation (FG), and River Operations. Due to the unique aspects of each of these organizations, we will issue a separate report on each organization. This report addresses the process for FG.

Based on our review, we determined that FG projects were approved by the appropriate levels of authority and contained a capital classification designated by Fixed Asset Accounting (FAA). We noted that 15 FG-cancelled projects contained a cancellation date occurring prior to Strategic Business Unit approval for cancellation which project management stated could be attributed to timing issues. In addition, we identified eight projects in which travel costs were split among projects. Although there is no policy governing the splitting of project costs, according to project management personnel, the dollar amount of costs allocated among projects would not be material. We also determined that Business Services is responsible for performing an independent review of project costs for reasonableness.

However, we determined there were control weaknesses that could allow business units to manipulate project costs in order to meet budget goals. Specifically, communication and monitoring controls were not adequately designed to mitigate the risk that project costs were (1) accurately and timely communicated for recording on the financial statements and (2) appropriately classified as capital costs rather than operations and maintenance costs. We determined:

- Communication by FG to FAA of project cancellation did not occur for 7 of the 24 cancelled projects we reviewed.
- Communication by FG to FAA of an additional 4 of the 24 cancelled projects we reviewed did not occur within the required time frame.
- Project documentation (1) was not updated with changes in project status as required for 4 of the 23 postponed and 3 of the 24 cancelled projects and (2) did not include a detailed reason for the postponement of 1 of the 23 postponed projects and 11 of the 24 cancelled projects.
- Several FG project cancellations occurred due to identification of a duplicate scope within other projects.

We recommended the Senior Vice President (SVP), FG, in conjunction with other organizations:

- Develop and implement a process for approving project cancellations prior to their communication to FAA and Business Services.
- Establish a process for ensuring that project plans are updated with the project status when cancelled or postponed as required by Standard Programs and Processes 2.1.
- Develop and implement criteria related to project cancellations including (1) time requirements for communication of project cancellations to FAA and Business Services and (2) monitoring requirements to ensure that all cancelled project costs are written off.
- Develop and implement a process for (1) reviewing projects to verify that scopes are not duplicated to ensure proper allocation of budgeted resources and (2) documenting reasons for project cancellations.

The SVP, FG, responded to a draft of our report and agreed with our recommendations. The SVP, FG, also provided planned actions to address those recommendations. We concur with FG management's planned actions.

## **BACKGROUND**

Each year, the Tennessee Valley Authority (TVA) initiates a wide variety of capital and operations and maintenance (O&M) projects. In that regard, TVA's project justification process is designed to ensure that such projects are aligned with TVA's vision, goals, and strategic plan objectives. As defined by TVA's Standard Programs and Processes (SPP) 2.1: Project Justification Process,<sup>1</sup> the process consists of identifying project initiatives, coordinating and completing project reviews, receiving funding, approving projects, and executing projects which include project postponement, cancellation, and closure. Projects are initiated, owned, managed, and executed by the respective Strategic Business Unit (SBU).

According to TVA's Capitalization policy, projects are classified as capital if they result in the creation of new assets, the replacement of existing assets, or the removal of existing assets. Projects are considered O&M if they repair, restore, test, inspect, or assess existing assets. In addition, any capital project that is cancelled should be reclassified as an O&M project and project costs expensed. Fixed Asset Accounting (FAA) personnel are responsible for determining the proper accounting classification for all projects under consideration for capitalization.

Capital projects greater than \$250,000 are required to be entered as stand-alone projects in the Project Justification System (PJS), which serves as the official database containing project data and project approval status.<sup>2</sup> Depending on the cost and type of the project, there can be multiple levels of project approval. Projects less than or equal to \$250,000 are grouped together and entered into PJS as a "bucket." Projects are classified as one of three categories:

- Strategic – Projects initiated or sanctioned by the Board or management with costs greater than \$8 million.
- Base – Projects specific to an SBU to maintain its mission with costs less than or equal to \$8 million.
- Discretionary – Projects classified as Economic/Revenue, Capacity Growth, and Reimbursable.

Occasionally, projects may require a revision to change the project scope or priority and may need to be suspended, accelerated, or deferred.<sup>3</sup> When such a change occurs, the respective SBU must ensure the project change process is followed and adequately documented. Specifically, the SBU is required to

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<sup>1</sup> During the review, SPP-2.1 was being revised to update the project authorization matrix. We used the latest approved revision for this testing.

<sup>2</sup> According to the Chief Financial Officer (CFO) personnel, PJS is a stand-alone application and is not linked to the general ledger application.

<sup>3</sup> According to CFO personnel, project postponements or deferrals include projects where the in-service date (ISD) has been extended past the original planned ISD. During the period of postponement, costs may still be incurred, and work may still be performed on the project.

(1) initiate a revised Project Justification (PJ) Form with an explanation for the change and identification of the impacts on the project cost, schedule, scope, and/or benefits, (2) coordinate appropriate reviews for revisions to projects, and (3) update the Five-Year Project Plan.<sup>4</sup>

Depending on the project cost, projects are required to have various levels of approval. Fossil Generation (FG) has a Project Approval Board (PAB) which is responsible for reviewing and approving projects and project revisions. According to FPG.SPP.02.002, the PAB consists of the FG Senior Vice President (SVP), the Site General Manager, Project Development Manager, and the Site System Engineer. The PAB is responsible for reviewing, evaluating, approving, and tracking projects implemented at or for fossil-owned or -controlled assets within established spending limits.

Once FG projects are approved, a project engineer or project manager is responsible for developing, coordinating, monitoring, and ensuring completion of the project. A Project Control Specialist (PCS) is responsible for assisting the project manager with project documentation and tracking.

We determined there were a total of 589 postponed capital projects and 87 cancelled capital projects in fiscal years (FY) 2007 and 2008. Of those totals, FG had 232 postponed and 79 cancelled projects (see Table 1). As of FY 2008, FG projects deemed as postponed had a total requested budget and total expenditures of approximately \$2.5 billion and \$404 million, respectively. FG-cancelled projects had a total requested budget of \$744 million and total expenditures as of September 2008 of approximately \$976,500 that had not been written off.<sup>5</sup>

|                                | Postponed Projects | Cancelled Projects |
|--------------------------------|--------------------|--------------------|
| <b>Fossil Generation</b>       | 232                | 79                 |
| <b>Nuclear Power Group</b>     | 80                 | 3                  |
| <b>Power Supply Operations</b> | 233 4              |                    |
| <b>River Operations</b>        | 32 1               |                    |
| <b>Other</b>                   | 12 0               |                    |
| <b>Total</b>                   | <b>589</b>         | <b>87</b>          |

**Table 1**

<sup>4</sup> The Five-Year Project Plan is a "living" document comprising the current list of projects maintained as the SBU's funded and prioritized projects currently being implemented or planning to be implemented.

<sup>5</sup> Requested budget totals were obtained from PJS project documentation, and expenditures were obtained from FAA. These totals do not include "bucket" projects.

## **OBJECTIVE, SCOPE, AND METHODOLOGY**

As part of our annual audit plan, we reviewed the process for postponing and cancelling capital projects. Our audit objective was to determine whether FYs 2007 and 2008 project postponements and cancellations were properly approved, effectively communicated, and monitored to prevent inappropriate charges. Our review specifically focused on the processes for Nuclear Power Group, Power System Operations, FG, and River Operations. Due to the unique aspects of each of these organizations, we will issue a separate report on each organization. This report addresses the process for FG. To achieve our objective, we:

- Reviewed relevant policies and procedures governing the approval, communication, and monitoring of FG capital projects, including SPP-2.1: Project Justification Process and FPG.SPP.02.002: Projects Process.
- Interviewed FG project management including PCS personnel, the Project Finance Specialist responsible for the PJS, FG Controller personnel, and FAA personnel.
- Identified 232 postponed<sup>6</sup> and 79 cancelled FG projects in FYs 2007 and 2008.
- Selected a statistical sample<sup>7</sup> of 23 postponed projects and 24 cancelled FG projects.
- Obtained and reviewed project documentation including PJ forms, Five-Year Project Plans, Capital Reporting Summaries, and year-to-date cost information.
- Attended an FG PAB meeting as well as a Chief Operating Officer monthly meeting to observe the project review and approval process.

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. Although we did not test for compliance with laws and regulations, nothing came to our attention during the audit that indicated noncompliance with laws and regulations.

## **FINDINGS AND RECOMMENDATIONS**

We determined all sampled capital projects reviewed were approved by the appropriate levels of authority and contained a capital classification designated

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<sup>6</sup> Postponed projects are defined as projects having an in-service date deferred to a later date.

<sup>7</sup> For projects selected in the samples, we reviewed all revisions within scope for the project.

by FAA. We also noted that 15 of the 24 FG-cancelled projects we reviewed contained a cancellation date occurring prior to SBU approval for cancellation, which project management stated could be attributed to timing issues. In addition, we identified eight projects in which travel costs were split among projects. There is no policy governing the splitting of project costs; however, according to project management personnel, the dollar amount of costs allocated among projects would not be material. We also determined that Business Services is responsible for performing an independent review of project costs for reasonableness.

However, we determined there were control weaknesses that could allow business units to manipulate project costs in order to meet budget goals. Specifically, communication and monitoring controls were not adequately designed to mitigate the risk that project costs were (1) accurately and timely communicated for recording on the financial statements and (2) appropriately classified as capital costs rather than O&M costs. We determined:

- Communication by FG to FAA of project cancellation did not occur for 7 of the 24 cancelled projects we reviewed.
- Communication by FG to FAA of an additional 4 of the 24 cancelled projects we reviewed did not occur within the required time frame.
- Project documentation (1) was not updated with changes in project status as required for 4 of the 23 postponed and 3 of the 24 cancelled projects and (2) did not include a detailed reason for the postponement of 1 of the 23 postponed projects and 11 of the 24 cancelled projects.
- Several FG project cancellations occurred due to identification of a duplicate scope within other projects.

## APPROVAL OF PROJECTS

According to TVA's SPP-2.1: Project Justification Process, each SBU is required to obtain approval as defined in the Project Authorization Matrix for funded projects and project revisions meeting certain criteria. Project approval is required to be documented on the PJ form. We selected a sample of 23 postponed and 24 cancelled projects and reviewed the PJS documentation for each project. We verified that all sampled projects contained a capital classification designated by FAA and were approved by the appropriate groups/individuals in accordance with SPP-2.1.<sup>8</sup>

In addition, we noted that 15 FG-cancelled projects had cancellation dates occurring prior to the SBU approval for cancellation and the Project Management Council cancellation approval date. Project management personnel stated that these could be attributed to timing issues.

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<sup>8</sup> We did not test the accuracy of FAA's classification during this review. We relied on procedures performed in OIG Audit 2009-12429; where no exceptions were identified in our testing of FAA financial reporting controls related to the capital classification of projects.

## COMMUNICATION OF PROJECT STATUS

To facilitate project tracking, project status must be communicated by FG project management to FAA, Business Services, and internal project personnel. Specifically, projects having a cancelled status should be communicated to FAA and Business Services to ensure accuracy and timeliness of financial reporting. Cancelled projects, as well as projects having a postponed status, are required to be communicated within the organization to better facilitate project management. According to FAA process documentation and the Controller's Web site, communication of project status to FAA includes the submission of Form 4013: Capital Projects Completion/Cancellation Notice for projects which are cancelled. Project cancellation status must also be submitted to Business Services since that organization is currently responsible for writing off project costs. Requirements for communicating this information to FAA and/or Business Services are included in FPG.SPP.02.002: Projects Process; however, the requirements are not specified in SPP-2.1. Communication of FG project status within the organization occurs informally and includes communication during the PAB meeting. In addition, project status is required by SPP-2.1 to be updated on the Five-Year Project Plan.

### Communication to FAA and Business Services

We requested project communication from FAA for the 24 sampled cancelled projects and determined that 7 FG projects were not communicated to FAA. In addition, we determined that communication to FAA of project cancellations was not timely for 4 of the 24 FG projects sampled. According to FAA, Form 4013 is required to be submitted to FAA no later than ten business days after the cancellation date. However, we noted that Form 4013 was sent to FAA approximately one year to one and one-half years after the cancellation date. In addition, we verified that two projects, one of which had Form 4013 sent to FAA, had not been written off as of September 2008 and had costs totaling approximately \$260,000. According to FAA personnel, there have been instances in which a business unit submitted Form 4013 and documented that costs have been expensed. However, FAA has subsequently found that, in some cases, the costs were not expensed.

### Communication Within FG

We obtained and reviewed the FG Five-Year Project Plans and determined that four postponed FG projects and three FG-cancelled projects were not updated on the Five-Year Project Plan. Specifically, we noted that (1) four postponed projects were not included on the Five-Year Project Plan, and (2) three FG-cancelled projects were included on the Five-Year Project Plan but were not marked as cancelled.

Based on discussions with project personnel and the review of project documentation, we determined that 22 of the 23 sampled postponed projects had been postponed for valid reasons. We were unable to determine whether one FG postponement was reasonable because the project documentation did not include a detailed reason for postponing the project. In addition, we noted the

project scope as well as the project budget decreased. We determined that all 24 sampled cancelled projects were cancelled for valid reasons. However, we noted that project documentation for 11 projects did not include a detailed reason for the cancellation, and three projects were cancelled as a result of being a duplicate of another project or the project scope was included as part of another project.

## MONITORING OF PROJECTS

According to TVA's Capitalization policy, FAA is responsible for determining the proper accounting classification for all projects under consideration for capitalization. According to FAA personnel, the project classification allows the SBU to charge appropriate costs related to the project as either capital or O&M, depending on the project classification. Specifically, if a project is designated as "capital" by FAA, it is the responsibility of the project manager to ensure only capital-type costs<sup>9</sup> are capitalized. Similarly, only noncapital costs should be charged to O&M. Any capital project that is cancelled should be reclassified as an O&M project and project costs expensed.

We determined through interviews and policy reviews that a PCS assists the project manager with the cost control of projects. According to FG project personnel, there is inconsistency among the organizations regarding the review of project details and costs. We reviewed a selection of capital costs for the sampled postponed FG and projects and determined that costs appeared to be correctly classified as capital costs. As discussed above, we also determined that two of the sampled FG-cancelled projects had project costs totaling approximately \$260,000 which had not been written off as of September 2008.

During the review of project costs, we identified eight FG projects in which travel costs were split among projects. According to FG project personnel, there is no policy governing the splitting of project costs. However, according to FG project management personnel, the dollar amount of costs allocated among projects would not be material enough to manipulate budget goals. In addition, we determined that Business Services is responsible for performing an independent review of project costs. Specifically, Business Services personnel are responsible for reviewing month-to-date and year-to-date variance reports for reasonableness.

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<sup>9</sup> Capital costs are costs incurred on the purchase of land, buildings, construction, and equipment needed to bring a project to a commercially operable status.

## **RECOMMENDATIONS**

We recommended the SVP, FG, in conjunction with other organizations:

- Develop and implement a process for approving project cancellations prior to their communication to FAA and Business Services.
- Establish a process for ensuring that project plans are updated with the project status when cancelled or postponed as required by SPP-2.1.
- Develop and implement criteria related to project cancellations including (1) time requirements for communication of project cancellations to FAA and Business Services and (2) monitoring requirements to ensure that all cancelled project costs are written off.
- Develop and implement a process for (1) reviewing projects to verify that scopes are not duplicated to ensure proper allocation of budgeted resources and (2) documenting reasons for project cancellations.

## **MANAGEMENT'S COMMENTS AND OUR EVALUATION**

FG's SVP responded to our report on May 18, 2010 (please see the Appendix). Based on the response, the following actions will be taken by FG consistent with our recommendations:

- Procedure FPG.SPP.02.002 will be revised to explicitly state the requirements for approving project cancellations prior to their communication to Financial Shared Services (FSS). On an interim basis, FG project management has issued a process work flow instruction.
- Procedure FPG.SPP.02.002 will be revised to more explicitly state the requirements for updating project plans when appropriate.
- FSS will develop a new procedure, FSS-SPP-13.11.1 (capitalization process), which will provide project cancellation criteria, including time requirements for communicating with FAA and Business Services.
- Procedure FPG.SPP.02.002 will be revised to include requirements for (1) a review of changes to verify scopes are not duplicated in the project plan and (2) documentation of the reason for project cancellation.

We concur with FG management's planned actions.

May 18, 2010

Robert E. Martin, ET 3C-K

REQUEST FOR COMMENTS – DRAFT AUDIT 2009-12291-03 – REVIEW OF POSTPONED  
AND CANCELLED CAPITAL PROJECTS – FOSSIL GENERATION

Thank you for the opportunity to review the subject draft audit. We offer the following status update and comments on your recommendations.

1. Develop and implement a process for approving project cancellations prior to their communication to FAA and Business Services.

Response:

TVA-SPP-2.1 includes governance oversight of Project Change Process. The requirements of TVA-SPP-2.1 are implemented by Fossil Generation procedure FPG.SPP.02.002. Procedure FPG.SPP.02.002 will be revised to explicitly state the requirements for approving project cancellations prior to their communication to Financial Shared Services. The procedure revision will be completed by August 1, 2010. On an interim basis, Fossil Project Management issued a process work flow instruction on April 16, 2010 to address above workflow requirements.

2. Establish a process for ensuring that project plans are updated with the project status as required by SPP-2.1.

Response:

The requirements of TVA-SPP-2.1 are implemented by Fossil Generation procedure FPG.SPP.02.002. Procedure FPG.SPP.02.002 will be revised to more explicitly state the requirements for updating project plans when appropriate. The procedure revision will be completed by August 1, 2010.

3. Develop and implement (1) criteria related to project cancellations including time requirements for communication of project cancellations to FAA and Business Services and (2) monitoring requirements to ensure that all cancelled project costs are written off.

Response:

Financial Shared Services (FSS) is developing a new procedure, FSS-SPP-13.11.1 (capitalization process), which will provide project cancellation criteria, including time requirements for communicating with Fix Assets Accounting (FAA) and Business Services. FSS Accounting reports that this procedure is expected to be issued in June 2010. Fossil Generation will follow this procedure.

Robert Martin  
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4. Develop and implement a process for (1) reviewing projects to verify that scopes are not duplicated to ensure proper allocation of budgeted resources and (2) documenting reasons for project cancellations.

Response:

Procedure TVA-SPP-2.1 includes governance oversight of Project Change Process. The requirements of TVA-SPP-2.1 are implemented by Fossil Generation procedure FPG.SPP.02.002. Procedure FPG.SPP.02.002 will be revised to include 1) review of changes to verify scopes are not duplicated in the project plan and 2) documenting reason for project cancellation as process requirements by August 1, 2010.

Please let me know if you need any clarification.



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