



Memorandum from the Office of the Inspector General

June 15, 2021

Gary P. Mazo

REQUEST FOR FINAL ACTION – EVALUATION 2020-15762-04 – ORGANIZATIONAL EFFECTIVENESS – COMMERCIAL ENERGY SOLUTIONS FUELS AND HEDGING

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 when final action is complete. In accordance with the Inspector General Act of 1978, as amended, the Office of the Inspector General is required to report to Congress semiannually regarding audits that remain unresolved after 6 months from the date of report issuance.

If you have any questions or wish to discuss our findings, please contact Jessica L. Monroe, at (865) 633-7338 or Lisa H. Hammer, Director, Evaluations – Organizational Effectiveness, at (865) 633-7342. We appreciate the courtesy and cooperation received from your staff during the audit.

David P. Wheeler
Assistant Inspector General
(Audits and Evaluations)

JLM:KDS

Attachment

cc (Attachment):

TVA Board of Directors
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Megan T. Flynn
David B. Fountain
Amanda D. Johns
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OIG File No. 2020-15762-04



Office of the Inspector General

Evaluation Report

To the Vice President,
Fuels and Hedging

ORGANIZATIONAL EFFECTIVENESS – COMMERCIAL ENERGY SOLUTIONS FUELS AND HEDGING

Audit Team
Jessica L. Monroe
Andi R. McCarter

Evaluation 2020-15762-04
June 15, 2021

ABBREVIATIONS

CES	Commercial Energy Solutions
CSS	Commercial and Systems Support
FY	Fiscal Year
F&H	Fuels and Hedging
SHRM	Society for Human Resource Management
TVA	Tennessee Valley Authority
VP	Vice President

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Evaluation 2020-15762-04 – Organizational Effectiveness – Commercial Energy Solutions Fuels and Hedging

EXECUTIVE SUMMARY

Why the OIG Did This Evaluation

Organizational effectiveness, as defined in this evaluation, is the ability of an organization to achieve its mission and goals. Due to the importance of alignment between strategy, team engagement, and operational performance, the Office of the Inspector General is conducting organizational effectiveness evaluations of business units across the Tennessee Valley Authority (TVA). This evaluation focuses on Fuels and Hedging (F&H), an organization within TVA's Financial Services' Commercial Energy Solutions.

In Fiscal Year 2020, 35 percent of TVA's total power supply came from coal or natural gas. F&H supports TVA's coal and natural gas power supply by developing and executing strategies that provide adequate fuel, transportation, and reagents to TVA's coal sites and the most economic and reliable supply to the natural gas fleet. The objective of this evaluation was to identify factors that could impact F&H's organizational effectiveness. Specifically, we identified behavioral and operational factors that affect organizational effectiveness.

What the OIG Found

During the course of our evaluation, we identified behaviors that had a positive impact on F&H. These included relationships with team members and most management. However, we also identified a behavioral risk related to relationships with a manager in one group. In addition, we identified risks to operations that could hinder F&H's effectiveness. These risks were related to inaccurate coal burn forecasts and interactions with business partners. Ratings are reflected in the table below:

	Low Risk	Medium Risk	High Risk
Behaviors		X	
Operations		X	

What the OIG Recommends

We recommend the Vice President, F&H, take actions to address relationship concerns with a manager in one group and concerns with interactions with business partners.



Evaluation 2020-15762-04 – Organizational Effectiveness – Commercial Energy Solutions Fuels and Hedging

EXECUTIVE SUMMARY

TVA Management's Comments

TVA management described actions taken and planned to address our recommendations. See Appendix B for TVA management's complete response.

Auditor's Comments

We agree with management's planned actions and actions taken.

BACKGROUND

Organizational effectiveness, as defined in this evaluation, is the ability of an organization to achieve its mission and goals. Due to the importance of alignment between strategy, team engagement, and operational performance, the Office of the Inspector General is conducting organizational effectiveness evaluations of business units across the Tennessee Valley Authority (TVA). This evaluation focuses on Fuels and Hedging (F&H), an organization within TVA's Financial Services' Commercial Energy Solutions (CES).

In fiscal year (FY) 2020, 35 percent of TVA's total power supply came from coal or natural gas. F&H supports TVA's coal and natural gas power supply by developing and executing strategies that provide adequate fuel, transportation, and reagents to TVA's coal sites and the most economic and reliable supply to the natural gas fleet. For FY 2020, F&H purchased and delivered 9 million tons of coal and purchased 251 billion cubic feet of natural gas. F&H is comprised of three groups: (1) Coal Services, (2) Natural Gas, and (3) Commercial Systems and Support (CSS).

- Coal Services' mission is "to establish a framework that enables TVA to deliver the fuel supply that meets the coal-fired generation fleet requirements at the lowest possible cost." The group, which includes Coal and Transportation Origination and Coal Logistics, develops and executes TVA's coal supply strategy to provide adequate fuel, transportation, and reagents to TVA's fossil plants. Coal and Transportation Origination is mostly comprised of (1) originators who purchase coal, fuel oil, transportation, reagents, and railcar services, and (2) asset management specialists who administer the contracts. Coal Logistics is comprised of (1) logistics specialists who plan, schedule, and monitor deliveries of coal and some reagents and (2) business support representatives who ensure that all deliveries are properly documented and entered into TVA's transaction management system for coal and coal transportation.
- The vision of the Natural Gas group, which includes Gas Supply, Gas Scheduling, and Commercial Operations, is to be recognized throughout TVA and the energy industry as a top tier commercial organization that serves the needs of TVA's generation fleet by positioning commercial assets and resources for long-term success. Gas Supply is responsible for development of short-term and long-term strategies for natural gas acquisition, storage utilization, and portfolio hedging including volume and price risk. Gas Scheduling is responsible for transporting natural gas to and from plants and storage facilities. Commercial Operations develops, executes, and maintains commercial and service agreements,¹ for natural gas supply and

¹ According to TVA personnel, commercial and service agreements for natural gas supply may include, but are not limited to, agreements that pertain to natural gas purchases, pipeline transportation, and gas storage, in order to serve the natural gas fired generation assets.

coordinates with the pipelines and gas plant operations to ensure a reliable supply of gas as conditions change.

- CSS is the compliance, improvement, and technology support team for F&H. This group is responsible for providing oversight and support for two Sarbanes-Oxley Act² transaction management systems. This responsibility includes (1) managing day-to-day operations of the systems by monitoring performance, configuration, maintenance, and repair; (2) maintaining security policies; (3) offering technical support; (4) leading problem solving efforts in collaboration with system vendors; and (5) providing support to external auditors to ensure transparency, open communication, and financial accountability for all system transactions. In addition, CSS creates and supports dashboards, which provide quick summary information and enhance work processes for coal contracts and logistics, natural gas transactions, and gas scheduling. CSS is also responsible for developing innovative solutions, supporting process improvement efforts, and maintaining the Business Continuity Plan.

F&H's FY 2021 initiatives include developing a fuel resilience strategy³ to support generation system reliability. A second initiative was expanding the fuel hedging strategy through collaborative efforts with several other business units. Metrics for FY 2020 included delivered cost of coal relative to TVA's peers and delivered cost of gas relative to Henry Hub and Transco Zone 5S.⁴ As of January 4, 2021, F&H consisted of 41 individuals, which included the Vice President (VP), 16 individuals in Coal Services, 17 individuals in Natural Gas, 5 individuals in CSS, and 2 individuals reporting directly to the VP.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of this evaluation was to identify factors that could impact F&H's organizational effectiveness. We assessed operations as of January 2021 and culture at the time of our interviews and fieldwork, which occurred between January 20, 2021, and February 4, 2021. To complete the evaluation, we:

- Reviewed (1) Financial Services FY 2020 through FY 2022 business plan, (2) CES' FY 2021 Risk Assessment, and (3) documentation provided by F&H to gain an understanding of the organization, including initiatives, metrics, and risks within F&H.
- Reviewed TVA values and competencies as of September 2020. See Appendix for an understanding of cultural factors deemed important to TVA.

² Under the Sarbanes-Oxley Act of 2002, Section 404, management is responsible for the adequacy and effectiveness of the financial reporting internal control structure.

³ The fuel resilience strategy will incorporate fuel supply availability, transportation costs, coal inventory management, and plant dispatch effectiveness. The strategy will outline short- and long-term execution objectives that include the overall supply chain process and potential risk impacts.

⁴ Henry Hub and Transco Zone 5S are used as a proxy for the TVA supply region prices.

- Reviewed select TVA Standard Programs and Processes and other documentation by F&H to gain an understanding of processes.
- Conducted individual interviews with 41 individuals, including management, and analyzed the results to identify themes related to factors that could affect organizational effectiveness.
- Interviewed or surveyed a nonstatistical sample of 85 individuals from other TVA organizations that work with F&H personnel and 1 individual responsible for supporting F&H. We analyzed the results to identify factors affecting organizational effectiveness from a business partner perspective.
- Reviewed coal burn forecasts documentation from F&H to better understand inaccuracies with the data provided by a business partner.
- Assessed the overall effectiveness of F&H in behavioral and operational aspects based on TVA's Business Operating Model.

This evaluation was performed in accordance with the Council of the Inspectors General on Integrity and Efficiency's *Quality Standards for Inspection and Evaluation*.

OBSERVATIONS

During the course of our evaluation, we identified behaviors that had a positive impact on F&H. These included relationships with team members and most management. However, we also identified a behavioral risk related to relationships with a manager in one group. In addition, we identified risks to operations that could hinder F&H's effectiveness. These risks were related to inaccurate coal burn forecasts and interactions with business partners.

BEHAVIORAL FACTORS

According to the Society for Human Resource Management (SHRM),⁵ employee engagement relates to the level of an employee's connection and commitment to the organization. SHRM also specifies drivers of employee engagement, including commitment of leaders, trust in leadership, and positive relationships with supervisors. TVA, in its Business Operating Model, states that engagement is one component of effective execution. TVA has also developed competencies intended to define common characteristics that set the tone for how work is to be performed in the organization. Defined behaviors are associated with the competencies to provide guidance as to how employees can demonstrate their commitment to TVA values. While individuals generally expressed having positive relationships with others in F&H and with most management, some individuals in one group expressed concerns regarding a manager in their group.

⁵ SHRM is a membership organization for Human Resource professionals.

Positive Relationships with Team Members

Most individuals had positive interactions within their group and trusted their coworkers to perform their jobs well. Specific comments included having good teamwork or interactions, working well together, and/or having team members that are helpful, supportive, and collaborative. In addition, many individuals commented positively on communication within their group. Most individuals in F&H also commented positively on morale, and several individuals specifically attributed morale to positive team interactions or working well together. Several individuals also commented positively on the tenure, experience, or abilities of the group.

Relationships with Management

TVA expects leaders to inspire trust and engagement by building a positive environment that motivates others to achieve and exceed organization goals and team aspirations. We asked individuals in F&H about relationships with their first-line leadership, middle management, and upper management. While individuals generally expressed having positive relationships with most management, some individuals in one group expressed concerns regarding a manager in their group.

Positive Interactions with Most Management

Most individuals commented positively on their relationships with first-line management. Specific comments included managers being supportive, having good knowledge of the work, and giving employees freedom to do their work without micromanagement. Most individuals also commented positively on communication with their first-line management, with many commenting positively about first-line managers asking for input and/or providing feedback. Most individuals indicated they trust first-line management and are comfortable reporting incidents, bringing up concerns, or raising a differing opinion from that of their manager. Most individuals commented positively on accountability from first-line management with positive comments including management setting expectations and checking in with employees on how the work is going. Most individuals commented positively on recognition from first-line management. Specific comments included management providing notes, instant messages, emails, or texts to recognize good work and sharing praise with the team or with upper management.

Most individuals commented positively on their relationship with middle management with several individuals commenting positively on the knowledge, understanding, or support of middle managers. Regarding communication, most individuals commented positively, with a few individuals specifically commenting that middle management is good at giving or receiving feedback. Most individuals indicated they trusted their middle management and that they felt comfortable reporting incidents, bringing up concerns, or raising a differing opinion from that of their manager. Most individuals who commented described middle management positively regarding accountability and recognition.

Of the individuals who commented,⁶ most were positive on their relationship with upper management with positive comments including leadership being intelligent, thoughtful, supportive, helpful, and/or responsive. Individuals who commented also indicated upper management does well with communication. Specific positive comments included upper management being open, easy to talk to, or approachable.

Relationship Concerns with Manager in One Group

TVA's leadership competencies and expected behaviors include effective communication and inspiring trust and engagement. While most individuals provided positive comments regarding interactions with management, some individuals in one group expressed concerns about interactions with a manager in their group. These concerns were related to a lack of guidance, direction or support, poor communication, fears of retaliation, and recognition. We discussed the specifics and severity of these issues with the VP of F&H and the Senior VP of CES.

RISKS TO OPERATIONS

Based on our interviews, we identified risks to operations that could impede F&H's effectiveness. While most individuals commented positively on having what they need to do their jobs, some individuals in one group expressed concerns with inaccurate and unusable coal burn forecasts provided by a business partner. In addition, business partner feedback indicated concerns and needed improvements in relation to collaboration and communication, and a few business partners described F&H as needing more knowledge in plant operations or accounting. Finally, some individuals in F&H indicated concerns pertaining to interactions with one business partner.

Inaccurate Coal Burn Forecasts

Some individuals in one group expressed concerns with inaccurate coal burn forecasts⁷ provided from a system owned by a business partner. According to F&H personnel, coal burn forecasts are used to plan short- and long-term coal needs. Most of these individuals indicated the forecast should be able to be used as provided. Instead, some individuals described the information obtained as unusable, resulting in manual edits by F&H staff to make the data usable. In addition, several individuals expressed frustration that F&H management and the business partner have not addressed this issue.

Individuals in F&H described the process of manually editing the data to make the information more reflective of actual coal operations. Examples of manual edits performed by F&H increased coal burn forecasts for one coal plant between 99 percent and 377 percent for March through May 2021. In addition, we reviewed the business partners' forecast, F&H manual edits, and the actual burn

⁶ Most individuals did not provide comments on upper management regarding trust, comfort-reporting incidents, raising a differing opinion, or bringing up concerns, accountability, or recognition.

⁷ Coal burn forecasts estimate coal burn in tons for each coal plant in the TVA fleet.

forecast for August 2020 through January 2021, and found the manual edits made by F&H were closer to the actual burn than the business partner's forecast for 3 of the 4 months⁸ where F&H made edits. Further, while F&H holds a monthly meeting with business partners to discuss manual edits to the coal burn forecast and gather feedback, according to F&H personnel, this process is not outlined in a standard policy or procedure.

According to F&H personnel, accurate forecasts are important for ensuring TVA contracts for the right amount of coal and does not overpay for coal or coal delivery. In addition, as TVA has announced plans to retire coal plants in the future, a couple of individuals described increased risks to TVA related to coal being purchased that is not used. The OIG has a concurrent evaluation of the Power Supply Plan, Evaluation 2020-15747, which will address these concerns in more detail.

Needed Improvements in Interactions with Business Partners

Accomplishing F&H responsibilities requires effective coordination with various business partners. Therefore, we interviewed or surveyed individuals from business units outside of F&H to determine their opinions related to F&H products and services, quality of feedback and communication, and timeliness. We also asked business partners to provide an area of improvement for F&H.

Overall, most individuals rated F&H above average for products and services, quality of feedback and communication, and timeliness. However, some business partners indicated that F&H could improve in the areas of collaboration and/or communication, and several business partners identified opportunities for F&H to address knowledge gaps in the organization. Specific comments from business partners indicated a desire for F&H to engage more with other business units or sites, be more supportive of other business units' policies, or rely on support organizations in TVA. In addition, several individuals commented that F&H needed to take a more enterprise-wide or holistic point of view and/or play on the bigger TVA team, with a few individuals indicating F&H is siloed from other business units in TVA. For example, several individuals involved with the Energy Trade Risk Management (ETRM)⁹ project commented on F&H needing to (1) take a more enterprise-wide view of the project and/or (2) be open to considering options that may serve TVA as a whole. Specific comments related to the project, indicated F&H is perceived as not collaborating well, not open to the viewpoints of others, not valuing the opinions of others, and/or being out for themselves.

Several business partners commented on not being included by F&H in communication or discussions that affect their work or discussed receiving communication from F&H after decisions that affect their work have been

⁸ For 2 months, F&H did not make edits to the business partner's forecast.

⁹ ETRM is a solution to allow multiple business units across TVA to use consolidated, integrated, and industry leading software, as an enterprise solution, to manage the business life cycle of energy related deals while alleviating associated risks.

made. Other examples included the desire for F&H to ensure a constant flow of information and communication between TVA groups and to increase transparency in communication. Lastly, several business partners commented on knowledge gaps in F&H, including the need for better understanding of plant operations or the need for more accounting knowledge.

In addition, we asked F&H interviewees about interactions with other business units. Some individuals in F&H indicated concerns with interactions with one specific business partner. We discussed these concerns with the VP of F&H and the Senior VP of CES

CONCLUSION

In FY 2020, coal and natural gas accounted for 35 percent of TVA's total power supply. Based on F&H's role in managing fuel and transportation of coal and natural gas for TVA's fleet, it is important for F&H to operate effectively. Interviews with individuals within F&H revealed positive relationships with team members and most management; however, some individuals in one group expressed concerns pertaining to relationships with a manager. In addition, we identified risks to operations that could hinder F&H's effectiveness. These risks were related to inaccurate coal burn forecasts provided by a business partner and interactions with business partners. Coal burn forecasts play an important role in planning short- and long-term fuel needs at coal plants, and as such, impact TVA's total power supply. Further, to accomplish their responsibilities F&H depends on effective coordination with various business partners. Addressing these behavioral and operational concerns can aid F&H in effective execution of their work.

RECOMMENDATIONS

We recommend the VP, F&H:

1. Address concerns related to relationships with one manager.

TVA Management's Comments – Management has addressed the concerns identified and will continue to monitor performance. In addition, management will continue to reinforce expectations for all members of management. See Appendix B for TVA management's complete response.

Auditor's Response – We agree with management's actions planned and taken.

2. Address concerns related to business partner interactions.

TVA Management's Comments – F&H is currently leading and/or participating on several different cross-functional teams with individuals from Operations, Financial Services, and the Office of General Counsel, which will

also provide an opportunity to enhance interactions with key business partners. In addition, F&H hosts a bi-monthly business partners meeting and will utilize feedback from this meeting to obtain recommendations for improvements. See Appendix B for TVA management's complete response.

Auditor's Response – We agree with management's actions planned and taken.

TVA Values	
Safety	We share a professional and personal commitment to protect the safety of our employees, our contractors, our customers, and those in the communities that we serve.
Service	We are privileged to be able to make life better for the people of the Valley by creating value for our customers, employees, and other stakeholders. We do this by being a good steward of the resources that have been entrusted to us and a good neighbor in the communities in which we operate.
Integrity	We conduct our business according to the highest ethical standards and seek to earn the trust of others through words and actions that are open, honest, and respectful.
Accountability	We take personal responsibility for our actions, our decisions, and the effectiveness of our results, which must be achieved in alignment with our company values.
Collaboration	We are committed to fostering teamwork, developing effective partnerships, and valuing diversity as we work together to achieve results.

TVA Leadership Competencies

Accountability and Driving for Results
Continuous Improvement
Leveraging Diversity
Adaptability
Effective Communication
Leadership Courage
Vision, Innovation, and Strategic Execution
Business Acumen
Building Organizational Talent
Inspiring Trust and Engagement

June 11, 2021

David P. Wheeler, WT 2C-K

RESPONSE TO REQUEST FOR COMMENTS – DRAFT EVALUATION 2021-15762-04 –
ORGANIZATIONAL EFFECTIVENESS - COMMERCIAL ENERGY SOLUTIONS FUELS AND
HEDGING

This is in response to the recommendations provided in your recent draft evaluation of organizational effectiveness with TVA's Fuels and Hedging (F&H) business unit.

F&H management appreciates the professionalism and efforts put forth by Lisa Hammer, Jessica Monroe, Andi Rebecca McCarter, and the audit team to conduct this evaluation. Our organizational effectiveness is of the utmost importance and we appreciate the time they took to understand our organization and make recommendations that will help us improve our operational performance and culture. We are pleased that the audit recognized and identified behaviors that have a positive impact on F&H especially those that help build relationships with team members and most management. This indicates to us that our group is and wants to be engaged and wants to contribute to our overall success.

We also agree with the two recommendations below and will address them in a manner that will improve our operational effectiveness.

Recommendation 1. Address concerns related to relationships with one manager.

F&H Response: The leadership issues referenced in your report were also identified as an area of concern in the last Glint Survey results. We have addressed the leadership concerns identified and we will continue to monitor performance. We will also continue to reinforce Financial Service's and our expectations for all members of management.

Recommendation 2. Address concerns related to business partner interactions.

F&H Response: F&H performance effectiveness is dependent upon collaboration and coordination with our business partners. The level of effectiveness is tied directly to engagement with our partners by transparency in communication, knowledge sharing, and understanding each other's challenges. As referenced in your report, F&H is currently leading and/or participating on several different cross-functional teams with individuals from Operations, Financial Services, and Office of General Counsel. While these teams were created to achieve specific goals supporting TVA's fuel resiliency initiatives and TVA's long-term asset strategy, they will also provide an opportunity to enhance our interactions with key business partners.

In addition, F&H hosts a bi-monthly business partners meeting. We will utilize this feedback to help evaluate meeting effectiveness and obtain recommendations for improvements.

David P. Wheeler
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June 11, 2021

Thank you for the opportunity to review and respond. Please let me know if you have any further questions.



Gary P. Mazo
Vice President
Fuels and Hedging
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Megan T. Flynn, LP 3A-C
David B. Fountain, WT 6A-K
Amanda D. Johns, LP 3A-C
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