



Memorandum from the Office of the Inspector General

August 29, 2016

David L. Owens, WT 9C-K

REQUEST FOR FINAL ACTION – EVALUATION 2016-15365 – COAL AND GAS SERVICES’ ORGANIZATIONAL EFFECTIVENESS

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 evaluations that remain unresolved after 6 months from the date of report issuance

Information contained in this report may be subject to public disclosure. Please advise us of any sensitive information in this report that you recommend be withheld.

If you have any questions or wish to discuss our findings, please contact Noel K. Kawado, Senior Auditor, at (865) 633-7348 or Lisa H. Hammer, Director, Evaluations – Organizational Effectiveness, at (865) 633-7342. We appreciate the courtesy and cooperation received from your staff during this review.

David P. Wheeler

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Assistant Inspector General
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NKK:BSC

Attachment

cc (Attachment):

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OIG File No. 2016-15365



Office of the Inspector General

Evaluation Report

To the Vice President, Coal
and Gas Services

COAL AND GAS SERVICES' ORGANIZATIONAL EFFECTIVENESS

Evaluation Team
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Evaluation 2016-15365
August 29, 2016

ABBREVIATIONS

CGS	Coal and Gas Services
CP&A	Commercial Processes and Assurance
ETNG	East Tennessee Natural Gas Pipeline
FY	Fiscal Year
HR	Human Resources
IDP	Individual Development Plan
JSCC	John Sevier Combined Cycle Plant
OFO	Operational Flow Order
SMART	Specific, Measurable, Achievable, Relevant, and Time-Bound
TVA	Tennessee Valley Authority
U.S.	United States of America
VP	Vice President

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Evaluation 2016-15365 – Coal and Gas Services’ Organizational Effectiveness

EXECUTIVE SUMMARY

Why the OIG Did This Evaluation

This is one in a series of organizational effectiveness reviews the Office of the Inspector General will be conducting across the Tennessee Valley Authority's (TVA) business units. Organizational effectiveness, as defined in this review, is the ability of an organization to achieve its mission and goals. To achieve and sustain organizational effectiveness, there should be alignment between strategy, operational performance, and team engagement. Specifically, values and behaviors that drive good performance should be embedded throughout the organization's business processes and exemplified by the individuals that manage and work in the organization.

In recent years, TVA has faced internal and external economic pressures and implemented cost-cutting measures in an attempt to keep rates low and reliability high while continuing to fulfill its broader mission of environmental stewardship and economic development. In 2015, TVA recognized in its 3-year Strategic Risk Profile that ongoing organizational refinement and optimization might negatively affect the performance environment.

Therefore, employee engagement is critical. A recent study identified the top drivers of employee engagement, which included: (1) individuals having a clear understanding of how their job contributes to strategy, (2) individual staff goals aligning with corporate goals, and (3) assessments and performance reviews aligning with corporate goals.ⁱ Without alignment, employees may struggle to understand their role in the organization, which may negatively impact employee engagement as well as overall effectiveness. Strong employee engagement not only boosts productivity for a company but also promotes employee innovation to create solutions to solve new problems and/or identify efficiencies.

Coal and Gas Services (CGS), a business unit falling under TVA's Power Operations strategic business unit, is responsible for the procurement, transportation, storage, and delivery of coal, natural gas, fuel oil, and reagents for all of TVA's power generation fleet. As of January 5, 2016, CGS had 56 employees, including management. This evaluation assesses strengths and risks that could impact CGS' organizational effectiveness.

ⁱ “The Impact of Employee Engagement on Performance,” Harvard Business Review, 2013, p. 7, https://hbr.org/resources/pdfs/comm/achievers/hbr_achievers_report_sep13.pdf.



Evaluation 2016-15365 – Coal and Gas Services’ Organizational Effectiveness

EXECUTIVE SUMMARY

What the OIG Found

CGS' basic mission is to provide reliable, cost-effective, and flexible fuel supply for TVA's generating fleet. CGS has identified several performance metrics to determine whether it is meeting these components of its mission. Based on our review, we found that CGS met its reliability metrics for gas and coal for fiscal year (FY) 2015 and FY2016 (through January 2016); although it did not meet some of its cost-effectiveness and fuel flexibility targets during the same period because of outside factors such as weather and price volatility. We identified strengths related to (1) employee teamwork, (2) management support of its employees, (3) employee engagement, and (4) working relationships with other TVA organizations. However, we also identified issues that, if left unresolved, could negatively impact CGS' effectiveness, both now and in the future. Specifically, we identified employee perceptions concerning management favoritism and lack of transparency in specific areas, which could be the result of alignment and goal measurement issues in CGS' performance reviews. In addition, we noted conditions that could negatively affect business relationships with gas pipeline companies and result in increased transportation risk. Finally, we identified issues related to knowledge transfer.

Based on our findings and using TVA's Business Operating Model, we assessed CGS' level of risk in the areas of alignment, execution, and engagement. As shown in Table 1, we determined alignment risk to be medium because of issues identified in CGS' performance reviews. We assessed execution of the mission as low risk, in part, because CGS met its reliability metrics for FY2015 and FY2016 (through January 2016). However, employee perceptions related to management favoritism and lack of transparency could negatively impact employee engagement, and ultimately, CGS' performance in the future, if those concerns are not resolved. In addition, the potential risk to natural gas transportation and issues related to knowledge sharing could adversely impact execution if not addressed or considered. Finally, we rated engagement as low risk. While employees, in general, seemed to enjoy their work and be proud to be part of CGS, the negative employee perceptions previously discussed could adversely impact this risk category.

	Low Risk	Medium Risk	High Risk
Alignment		x	
Execution	x		
Engagement	x		

Table 1



Evaluation 2016-15365 – Coal and Gas Services’ Organizational Effectiveness

EXECUTIVE SUMMARY

What the OIG Recommends

We made recommendations to the Vice President, CGS, related to (1) the recommunication to employees of certain career-related processes and policies, (2) the performance review process, (3) issues that could impact natural gas transportation, and (4) knowledge transfer. Our detailed recommendations are listed in the body of this report.

The Office of the Inspector General will conduct a follow-up review of CGS approximately 6 months after the final report date to assess progress in addressing the report’s findings and recommendations.

TVA Management’s Comments

TVA management agreed with our recommendations and described action plans committed, in process, or already completed. See Appendix B for TVA management’s complete response.

BACKGROUND

This is one in a series of organizational effectiveness reviews the Office of the Inspector General will be conducting across the Tennessee Valley Authority's (TVA) business units. Organizational effectiveness, as defined in this review, is the ability of an organization to achieve its mission and goals. To achieve and sustain organizational effectiveness, there should be alignment between strategy, operational performance, and team engagement. Specifically, values and behaviors that drive good performance should be embedded throughout the organization's business processes and exemplified by the individuals that manage and work in the organization.

In recent years, TVA has faced internal and external economic pressures and implemented cost-cutting measures in an attempt to keep rates low and reliability high while continuing to fulfill its broader mission of environmental stewardship and economic development. In 2015, TVA recognized in its 3-year Strategic Risk Profile that ongoing organizational refinement and optimization might negatively affect the performance environment.

Therefore, employee engagement is critical. A recent study identified the top drivers of employee engagement, which included: (1) individuals having clear understanding of how their job contributes to strategy, (2) individual staff goals aligning with corporate goals, and (3) assessments and performance reviews aligning with corporate goals.¹ Without alignment, employees may struggle to understand their role in the organization, which may negatively impact employee engagement as well as overall effectiveness. Strong employee engagement not only boosts productivity and encourages successful execution of performance objectives for a company but also promotes employees to be innovative and create solutions to solve new problems and/or identify efficiencies.

Coal and Gas Services (CGS) is a business unit falling under TVA's Power Operations strategic business unit. In general, CGS is responsible for the procurement, transportation, storage, and delivery of coal, natural gas, fuel oil, and reagents for all of TVA's power generation fleet. As of September 30, 2015, CGS provided these services to TVA's fossil, gas, and diesel generating units, which had a total combined summer net dependable capacity of 20,951 megawatts.² As shown in Table 1 on the following page, fuel expenses³ incurred by CGS comprised more than 20 percent of TVA's total operating expense in fiscal years (FY) 2014 and 2015.

¹ "The Impact of Employee Engagement on Performance," Harvard Business Review, 2013, p. 7, https://hbr.org/resources/pdfs/comm/achievers/hbr_achievers_report_sep13.pdf.

² As of September 30, 2015, the total summer net dependable capacity of units operated by TVA was 33,099 megawatts.

³ This includes the consumption costs of coal, natural gas, fuel oil, reagents and the transportation and storage costs thereof.

	FY2014 (in millions)	FY2015 (in millions)	FY2016 (thru December 2015) (in millions)
Total Fuel Expense – Combined Cycle/Combustion Turbine and Coal-Fired Plants	\$2,346.02	\$2,080.48	\$ 356.91
TVA Total Operating Expenses	\$9,548.00	\$8,788.00	\$2,280.00
Total Combined Cycle/Combustion Turbine and Coal-Fired Plant Fuel Expense as a Percentage of TVA Total Operating Expenses	24.57%	23.67%	15.65%

Table 1

According to CGS, its mission is to:

Manage TVA's coal and gas fuel supply in a manner such that our decisions result in the best solutions for TVA's generation fleet and our ratepayers. We will achieve these results by being
 1) responsive to changing markets and environments,
 2) resourceful in optimization of available resources, 3) innovative and constantly seeking options and solutions, 4) adaptable to new ways of thinking, and 5) constantly communicating and collaborating with stakeholders.

CGS' FY2016 through FY2018 business plan sets forth its key metrics, which included:

- Number of Coal Fuel Emergencies – Less than 10 days of coal inventory at a coal-fired plant with no deliveries in route.
- Number of Gas-Related Interruptions – A commercial interruption at a gas-fired generation site due to failure to (1) acquire sufficient natural gas supply based on a day ahead dispatch by Transmission Operations and Power Supply or (2) nominate firm or interruptible transportation contracts to the necessary pipelines in order to support the day ahead dispatch by Transmission Operations and Power Supply.
- Delivered Cost of Coal – Delivered cost of coal per one million British thermal units, where the delivered cost of coal is comprised of coal receipts; adjustments related to coal quality; and costs related to terminal handling and storage, leased railcars, coal freeze proofing, and coal sampling.
- Delivered Cost of Coal versus Peers – Metric measures the percentage difference that TVA's delivered cost of coal metric is above or below the peer group (which is comprised of Southern Company, Duke, American Electric Power, Ameren, and Entergy) average.
- Delivered Cost of Gas Relative to Henry Hub – Delivered cost of gas as a percentage of the weighted average cost of Henry Hub settle prices, where the delivered cost of gas is calculated as the cost of gas (i.e., commodity plus

- variable costs) divided by gas burn. Data used to calculate this metric excludes information related to the John Sevier Combined Cycle Plant (JSCC).
- Delivered Cost of Gas Relative to Transco Zone 5 – Delivered cost of gas (for JSCC) as a percentage of the forecasted Transco Zone 5 basis,⁴ where the delivered cost of gas is calculated as cost of gas (i.e., commodity plus variable costs) divided by gas burn. Data used to calculate this metric is specific to JSCC.

As of January 5, 2016, CGS had 56 employees, including management. As of that date, CGS' management structure included a vice president (VP) and three directors, who oversee each of CGS' three departments: Coal Logistics, Natural Gas, and Commercial Processes and Assurance (CP&A). The Coal Logistics and Natural Gas groups are primarily responsible for the procurement, transportation, and delivery of coal, natural gas, fuel oil, and reagents of TVA's power generating fleet. CP&A performs internal assessments and on-site monitoring of these commodities (to verify quantity and quality) and oversees and supports fuel management information systems.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objective of this evaluation was to identify strengths and risks that could impact CGS' organizational effectiveness. We assessed CGS' operations and culture from October 2014 to April 2016. To complete the evaluation, we:

- Reviewed CGS' FY2016 through FY2018 business plan to gain an understanding of CGS' goals.
- Reviewed TVA values, behaviors, and competencies (see Appendix A) for understanding of cultural factors deemed important to TVA.
- Interviewed the VP and direct reports from the Coal Logistics, Natural Gas, and CP&A groups as well as two other designated supervisory/management-level employees to obtain their perceptions related to strengths and risks that could affect organizational effectiveness.
- Conducted interviews with 49 CGS employees⁵ and analyzed the results to identify themes related to strengths and risks that could affect organizational effectiveness.
- Conducted interviews of 22 employees from other judgmentally selected TVA organizations that work closely with CGS and analyzed results to identify CGS strengths and risks from a customer service standpoint.

⁴ According to CGS, JSCC's physical location subjects it to higher price volatility as compared to other gas plants in TVA's generation portfolio. Therefore, for consistency purposes, CGS uses the Transco Zone 5 basis (which CGS has determined is a proxy for the JSCC supply region prices) against which to measure its cost performance specifically for JSCC.

⁵ One individual had left TVA employment at the time we conducted our interviews.

- Reviewed Power Operations and CGS operational and cultural data, such as gas pipeline invoices and individual performance documents, to utilize in our assessment of identified strengths and risks.
- Reviewed select TVA Standard Programs and Processes and guidelines to gain an understanding of processes and controls.
- Reviewed results of TVA's 2015 employee engagement survey to gain additional understanding of the CGS work environment.
- Assessed CGS' risks in the following areas, as included in TVA's Business Operating Model:
 - Alignment – How well the organization coordinates the activities of its many components for the purpose of achieving its long-term objectives—this is grounded in an understanding of what the organization wants to achieve, and why.
 - Execution – How well the organization achieves its objectives and mission.
 - Engagement – How well the organization achieves the highest level of performance from its employees.

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

OBSERVATIONS

CGS met its reliability metrics for gas and coal for FY2015 and FY2016 (through January 2016); although, it did not meet some of its cost-effectiveness and fuel flexibility targets during the same period because of outside factors. With respect to CGS' work environment, we identified strengths related to (1) employee teamwork, (2) management support of its employees, (3) employee engagement, and (4) working relationships with other TVA organizations. However, we also identified issues that, if left unresolved, could increase the risk that CGS will not be able to effectively meet its mission in the future. These issues related to:

- Employee perceptions of management favoritism and lack of transparency;
- CGS' penalties from gas pipeline companies and the potential negative impact on gas transportation; and
- Knowledge transfer.

STRENGTHS

Based on operational data we reviewed, CGS met its target reliability metrics for gas (i.e., Number of Gas-Related Interruptions) and coal (i.e., Number of Coal Fuel Emergencies) during FY2015 and FY2016 (through January 2016). CGS did not meet some of its metrics addressing cost-effectiveness and/or fuel

flexibility during the same period, because some components included in those measures are influenced by factors outside of CGS' control, such as weather and price volatility.⁶

During the course of our interviews and data analyses, we identified work environment strengths that positively affected the day-to-day activities of CGS' employees and performance. These strengths included: (1) employee teamwork, (2) positive views of most management, (3) employee engagement, and (4) positive working relationships with other TVA organizations.

Employee Teamwork

Within their own departments, CGS employees felt a strong sense of teamwork, which is a component of TVA's "Collaboration" value. Employees stated they worked and communicated well with each other and assisted each other in their duties.

Positive Views of Most Management

Most employees we interviewed shared positive views of CGS management. In particular, these employees stated that CGS management communicated well and understood their work. Most employees indicated that management was receptive to receiving employee feedback and maintained an open door policy. Employees also commended management for implementing a job-shadowing program to allow individuals to gain exposure to other positions within or outside of CGS. Finally, several employees specifically praised the Director of CP&A for his excellent communication skills, support of employees, approachability, and aptitude for providing good feedback.

Employee Engagement

Most employees seemed to enjoy their work and be proud to be part of CGS. Employees also discussed their efforts in helping CGS achieve its mission and goals. For example, some employees described their efforts to streamline contracts and look for new ways to be cost-effective when procuring coal and gas.

Positive Working Relationships With Other Organizations

We interviewed several representatives from other TVA organizations that work with CGS to obtain their views of the quality of customer service provided by CGS. Most individuals we interviewed held positive views of the organization, stating that CGS, in general, provided information that was responsive to their needs.

RISKS

As noted above, we assessed CGS' level of risk in the areas of alignment, execution, and engagement. Our interviews of CGS personnel and review of operational information disclosed issues that could pose risks to CGS'

⁶ For example, to maintain reliability, TVA may need to purchase additional coal and gas during unseasonably cold or warm periods. If gas or coal prices have increased during these periods, CGS' cost-effectiveness metrics could be negatively impacted.

effectiveness and its continued ability to achieve its mission. These issues related to (1) employee perceptions of management favoritism and lack of transparency that could be driven by deficiencies in CGS' performance reviews, (2) the potential negative impact of CGS' penalties from gas pipeline companies on gas transportation risk, and (3) knowledge transfer.

Employee Perceptions of Management Favoritism and Lack of Transparency

Our interviews with employees disclosed perceptions of management favoritism and lack of transparency related to filling vacancies, job rotations, and the succession planning (i.e., 9-box) tool. Regarding filling vacancies, some employees believed CGS management did not give all potential candidates a fair opportunity during the selection process. These employees felt that management was not objective in their assessment of candidates because, in their minds, management had already selected an individual before giving all candidates fair consideration.

Another area of concern for some employees was job rotations. Some employees stated they were not made aware of job rotations, and these positions were not equally offered to everyone. CGS management stated that although job rotations are not posted, they have communicated that employees can be considered for job rotations by including that desire on their Individual Development Plan (IDP)⁷ or by informing their manager.

Several employees also voiced concerns related to how CGS conducted its succession planning (i.e., 9-box) process. For example, some employees stated the process involved management going "behind closed doors" to discuss employees' performances, and management never shared with employees where they were placed on the 9-box. Some employees felt this lack of transparency caused tension among employees and promoted an environment for spreading rumors. According to CGS management, TVA's Human Resources (HR) has instructed them not to share the 9-box discussions and results with employees and that employees should know where they fall in the 9-box based on their performance review results and discussions with their manager.

Deficiencies in CGS' Performance Review Process

According to TVA's Employee Handbook, the intent of TVA's performance review process⁸ is to develop individual goals that align with business needs and assess individual performance against those goals. TVA's performance goal-setting guidance provides that goals should cascade such that employees can see how their work and goals contributes to the goals of their department, business unit, strategic business unit, and ultimately, TVA. In addition, TVA guidance states

⁷ An IDP is a formalized plan to promote the development and professional success of an individual by addressing areas in need of development and leveraging strengths. TVA management and specialists and those receiving tuition reimbursement are required to complete IDPs each year.

⁸ TVA utilizes ePerformance to administer its "Year-End Performance Review" process. The process is initiated by the goal-setting phase and culminates in an overall assessment of that individual's performance (as of the respective FY end). In addition, for TVA leadership and individual contributors, a mid-year review of goals is required to discuss progress against goals.

that the goal-setting process should be “participative,” where both the manager and employee are involved in the development of goals to ensure understanding and commitment. CGS employees are rated on individual goals and TVA’s core competencies, each of which account for 50 percent of an employee’s overall performance rating. During our review, we identified several deficiencies in CGS’ performance reviews, including goal alignment and performance measurement criteria, which could contribute to employee perceptions related to management favoritism and lack of transparency in succession planning.

- *Goal Alignment* – Based on our review of a judgmental sample of CGS employee performance documents⁹ for the FY2016 performance year, we found several instances where performance goals did not cascade or promote alignment to CGS’ and/or TVA’s mission. For example:
 - A manager and three direct reports had the exact same performance goals, even though that manager oversaw their work and had broader responsibilities than the direct reports.
 - Some individuals had a goal of “Hit FY16 CGS Budget,” without further specificity as to how their individual performance would contribute to that metric.
 - Most individuals in CGS work primarily in an office environment that does not present the same safety risks as other TVA work environments, such as at generating plants. However, some individuals in CGS had safety goals that accounted for 20 percent of their performance objective rating (which effectively accounted for 10 percent of their overall performance rating).¹⁰ While we agree safety is important to the achievement of CGS’ and TVA’s goals, we believe that, given the reduced safety risks associated with working in an office environment, the weighting of safety in some employees’ performance documents may not be appropriate. By comparison, we noted the safety goal of a Shift Operations Supervisor at one of TVA’s generating plants accounted for 10 percent of that individual’s overall performance rating.
 - Performance documents of some employees at the same level contained significantly different goals (in terms of quantity and level of effort).
- *Performance Measurement Criteria* – According to TVA, performance goals should be specific, measurable, achievable, relevant, and time-bound (SMART). However, we noted several performance documents only defined competencies rather than set specific goals associated with those competencies. In addition, our review disclosed several instances where performance documents contained performance objective goals that were not specific and/or could be difficult to measure. For example, one goal was “Improved fundamental knowledge that will allow for increased strategy development to the Gas Supply Portfolio.”

⁹ For purposes of this evaluation, we only reviewed selected individuals’ goals and refer to the documents containing those goals as “performance documents.”

¹⁰ Individuals are rated on two sections in their performance reviews—individual goals and TVA’s core competencies. Each section accounts for 50 percent of the overall rating.

We further noted that performance documents did not specify measurement criteria for meeting overall performance ratings (i.e., “solid,” “unsatisfactory,” “inconsistent,” “strong,” or “superior”), which could help employees assess their own performance and allow more meaningful performance discussions with their manager.

While CGS management stated they have told employees they should know where they place in the 9-box based on their performance reviews, employees may have difficulty making this assessment because of the performance documents’ alignment and measurement issues discussed above. Because of alignment issues, employees may not understand how their work contributes to the goals of their manager, CGS, and/or TVA. In addition, the measurement issues may not allow employees to reasonably gauge their performance and clearly know what is expected of them. Furthermore, goals that are less precise can introduce more subjectivity into the assessment process, which employees may perceive as a way to favor certain employees. When combined, these issues could undermine employees’ confidence in the performance review process and possibly cause them to dismiss their manager’s assessment of them. These feelings could promote perceptions of favoritism around job rotations and compete positions because the selection criteria in these two areas are heavily based on a candidate’s previous and current performance.

Potential Negative Impact of CGS’ Penalties From Gas Pipeline Companies on Gas Transportation Risk

TVA contracts with pipeline companies to transport natural gas from its source to TVA’s gas plants and schedules that transportation based on the expected demands of its gas plants. If the volume of gas scheduled does not reflect the actual amount used during times when it is critical for pipeline companies to be in balance,¹¹ TVA can incur penalties from pipeline companies. In response to a prior evaluation¹² finding, CGS stated that it would track all penalties in excess of \$1,000. We noted that CGS is not currently tracking financial penalties assessed by pipeline companies.

Based on our review of pipeline invoices, we identified approximately \$850,000 in penalties assessed to TVA by pipelines since FY2014 through February 2016. These penalties were incurred primarily with ANR Pipeline Company and East Tennessee Natural Gas Pipeline (ETNG).¹³

¹¹ Maintaining the operational integrity of the physical pipeline is a critical responsibility of the pipeline company. Under certain situations, a pipeline company will issue an Operational Flow Order (OFO) to notify shippers (e.g., TVA) that their gas inflows must match their outflows within a tolerable limit. OFOs can be issued for maintenance issues, if the pipeline does not have enough gas and pressures have dropped below operational minimums, or if the pipeline has too much gas and pressures are reaching operational maximums.

¹² We received management’s decision to Evaluation Report 2014-15048, Review of Natural Gas Monitoring, on February 12, 2015.

¹³ In September 2015, ETNG refiled their tariff with the Federal Energy Regulatory Commission. Based on documentation we reviewed, this refiling was prompted by shippers, including TVA, being out of balance during times when the pipeline issued OFOs requesting shippers to match their inflows with their outflows.

Some individuals we interviewed as part of our evaluation expressed concern about the penalties TVA has incurred with gas pipeline companies and the risks it could present to CGS and TVA achieving their missions. Specifically, these employees felt incurring multiple penalties over a relatively short period could damage business relationships with pipeline companies, which could increase TVA's risk of being able to transport natural gas to TVA's generating plants. Pipeline companies may construe the willingness to incur penalties as disregard for the operational integrity of the pipeline, which could result in impaired relationships with the pipeline company. Importantly, the only currently available pipeline option for the JSCC plant is ETNG. If business relationships with ETNG are damaged, the pipeline may choose to impose more stringent requirements on TVA or to discontinue doing business with TVA in the future. This could decrease JSCC's ability to receive natural gas and increase its reliability risk. With the increasing demand for natural gas across the utility industry, there is greater demand for the limited pipeline space to transport that gas, and as such, gas companies may be in a better position to be more selective about the companies with whom it conducts business. Tracking penalties could help CGS monitor relationship risks with natural gas pipelines, which could help it continue to meet its reliability goals in a future of potential increasing pipeline demands.

Knowledge Sharing

During our interviews, employees across all three departments in CGS expressed their concern that there was not enough knowledge being shared among people in their group, especially from experienced individuals to newer employees. These employees considered this a frustration because they believe more knowledge sharing would help them better perform their responsibilities in the case of more tenured staff leaving the group.

Without adequate knowledge sharing, there is the risk that employees may not perform their job duties effectively, which could negatively impact CGS' overall effectiveness.

CONCLUSION

CGS operates in highly complex and dynamic industries. For instance, the 2015 Annual Energy Outlook from the Energy Information Administration, which contains forecasts within the energy industry through 2040, makes several observations regarding coal and gas as follows:

- The United States (U.S.) is expected to increase its exports of natural gas beginning in 2017 and continue through 2040. This could decrease natural gas supply in the U.S. and result in increased gas prices.
- However, under other scenarios, the Energy Information Administration expects U.S. dry gas production to satisfy higher levels of U.S. gas consumption and higher exports. This would tend to cause gas prices to decrease.

- Natural gas overtakes coal as the largest portion of generation costs in consumer electricity bills. This reflects the increased reliance on natural gas and the lessening reliance on coal.

In addition, we noted coal transportation prices are expected to increase. Due to the decline in coal use, the price for transporting coal has increased, which has caused railroads to decrease the number of locomotives used and to reroute lines. This could affect TVA's ability to get coal to its coal-fired plants timely and in a cost-effective manner.

These industry risks, coupled with CGS' importance to TVA in helping to meet its mission of delivering power to the citizens of the Tennessee Valley, underscores the significance of CGS' ability to be effective. Based on TVA's Business Operating Model, we evaluated the risk of three critical areas that could impact CGS' effectiveness, including: (1) alignment, (2) execution, and (3) engagement, as follows:

- Alignment risk is medium because of the issues identified in CGS' performance reviews. Specifically, we noted that goals did not always cascade or promote alignment to CGS' or TVA's missions. In addition, we found that there were no clear criteria for assessing overall performance. While their primary impact is on alignment, these deficiencies could also negatively affect both engagement and execution.
- Execution risk is rated low, in part, because CGS met its reliability metrics for FY2015 and FY2016 (through January 2016). However, the potential negative impact of CGS' penalties from gas pipeline companies on gas transportation and the issues related to knowledge sharing could adversely impact execution, if not addressed or considered.
- Engagement risk is low because while employees seemed to enjoy their work and be proud to be part of CGS, employee perceptions related to management favoritism and lack of transparency could negatively impact this risk category.

These risks, if not resolved or adequately considered, could negatively impact alignment, execution, and engagement, and ultimately affect CGS' ability to meet its mission in the future.

RECOMMENDATIONS

We recommend the VP, CGS, working with CGS Directors:

1. Recommunicate to employees the:
 - a. Job rotation process and requirements.
 - b. Succession planning process and TVA's HR policy regarding nondisclosure of 9-box results.

2. Perform the following related to the performance review process:
 - a. Align performance goals, such that goals cascade from top to bottom to create line-of-sight from employees' job duties to their performance goals and CGS' mission.
 - b. Assist employees in developing goals that align with CGS' overall goals, which are SMART.
 - c. Assess the weighting of categories in the "Performance Objectives" section of performance documents and adjust, as appropriate, in light of job duties and performance goals.
 - d. Develop criteria around individual overall performance ratings.
3. Track financial penalties related to OFOs, as described in CGS' management decision corresponding to Evaluation 2014-15048, Review of Natural Gas Monitoring, and monitor penalties to assist in managing business relationships with gas pipeline companies.
4. Assess gaps in the knowledge transfer process and implement solutions as appropriate.

The Office of the Inspector General will conduct a follow-up review of CGS approximately 6 months after the final report date to assess progress in addressing the report's findings and recommendations.

TVA MANAGEMENT'S COMMENTS

In response to our draft report, TVA management stated they agreed with our recommendations. To address these recommendations, TVA management stated:

1. A communication plan has been initiated specifically addressing concerns around the CGS job rotation process and TVA's philosophy regarding succession planning results. Management also stated that discussions about the job rotation process have taken place, and they are working with CGS' HR Business Partner to address succession planning questions.
2. Enhancements to performance review practices will take place beginning with the FY2017 goal-setting process. These enhancements include: (a) aligning employee performance goals with CGS' mission and Power Operations' goals, (b) assisting employees in developing goals that are SMART, (c) reviewing the weighting categories for alignment with job duties and performance goals, and (d) reviewing criteria for each competency and aligning to individual overall performance ratings. As part of this effort, management stated employees have been encouraged to schedule supplemental performance review meetings with their manager to discuss, among other things, career goals and developmental opportunities.

3. Realignment of roles and responsibilities within CGS was initiated in April 2016 to better promote efficiencies and performance internally as well as with interactions with key stakeholders. This realignment will include a review of the tracking of financial pipeline penalties.
4. CGS leadership will work with the Employee Advisory Group and CGS employees to ensure knowledge sharing concerns are adequately addressed, especially in areas where junior staff could benefit from unique learning opportunities.

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

August 17, 2016

David P. Wheeler.ET 3C-K
Assistant Inspector General, Audits and Evaluations

**RESPONSE TO REQUEST FOR COMMENTS – DRAFT EVALUATION 2015-15365 – COAL AND GAS SERVICES
ORGANIZATIONAL EFFECTIVENESS**

Mr. Wheeler:

This letter is in response to the recommendations provided in the OIG July 18, 2016 draft evaluation of Coal and Gas Services Organizational Effectiveness report. My leadership team and I agree with the recommendations and will develop a plan in response to the findings. With input from the CGS Employee Resource Group (ERG) we have already implemented initiatives to address concerns identified in TVA's 2015 Employee Engagement survey. These initiatives are intended to enhance employee engagement and transparency within our organization and will be included in the responses to your recommendations.

CGS Leadership acknowledges the value and benefits of employee engagement and strives to create a working environment that encourages teamwork, collaboration, innovative thinking and professional development. We believe this type of environment fosters and supports performance excellence for the employees and our business unit. As TVA's generation mix changes within the coal and gas fleet, our ability to adapt and engage with each other is essential to everyone's success and the success of the organization. Adaptability and engagement enable our group to make sound financial and operational decisions that support the generation demands of the coal and gas fleet and ultimately serve the Valley ratepayers.

We consistently reinforce TVA's Business Operating Model (see attachment) which emphasizes the importance of business alignment, engagement and execution. The TVA values are a key component of creating alignment in that model, with competencies and behaviors as a foundation. Over the past year, CGS has given considerable focus to educating employees on those values and competencies.

CGS has an active ERG which is comprised of several non-manager employees. They meet frequently and provide updates at the CGS All Hands Meeting. In December 2015, the ERG presented an action plan for addressing concerns noted in TVA's 2015 Employee Engagement Survey. Specific actions (see attachment) were tied to each of the following issues:

1. Performance Reviews/Rankings
2. Team Morale/Management Transparency/Trust
3. Generation Gaps
4. Developmental Opportunities

Regarding recommendation 1 - CGS Leadership reviewed the initiatives presented in response to the 2015 Employee Survey. We initiated a communication plan specifically addressing concerns around the CGS job rotation process and TVA's philosophy regarding Succession Planning results.

CGS Leadership discussed the Job Rotation Assignment Process in detail with their employees either individually or as a topic at staff meetings. In FY16, one CGS employee completed a rotational assignment. Currently, one employee is in a rotational assignment. CGS Leadership and our HR Business Partners are working together to address Succession Planning questions.

Regarding recommendation 2, CGS Leadership will enhance performance review practices utilizing the TVA performance review process to be responsive to the issues identified in the recommendation. The enhanced practices will include:

- Alignment of employee performance goals with the CGS mission and Power Operations' goals
- Assistance to employees in developing goals that are S.M.A.R.T.
- Review of weighting categories and alignment with job duties and performance goals
- Review criteria for each competency and align to individual overall performance ratings

CGS Leadership is working on this effort and will implement with FY17 Goals. As part of this effort, employees have been encouraged to schedule supplemental performance review meetings with their managers. These discussions are in addition to the standard mid-year and annual performance review meetings and are the responsibility of the employee. During these meetings employees are also encouraged to discuss career goals and developmental opportunities with their manager.

Regarding recommendation 3, Coal & Gas Services has been and continues to be good stewards on the pipelines which serve the TVA Natural Gas fired fleet. As our NG fired generation continues to grow, CGS is realigning roles and responsibilities within the organization to promote better efficiencies and performance internally as well as with our interactions with key stakeholders.

The realignment of roles directly addresses the concerns and recommendations of the OIG and will include a review of the financial tracking of pipeline penalties. CGS has an excellent rapport with the commercial and gas control teams of each pipeline which is reflected in our Reliability metric.

This realignment process began in April of 2016 and will be an on-going process.

Regarding recommendation 4, CGS Leadership will work with the EAG and our employees to ensure we are adequately addressing concerns regarding knowledge sharing, especially in the areas where junior staff could benefit from unique learning opportunities.

Knowledge transfer was an item presented by the ERG in December 2015 and CGS implemented initiatives addressing this gap. CGS has hosted several Lunch and Learn sessions with employee selected topics and will continue to host learning sessions going forward. Some of the topics that were covered are Railcar 101, Load Forecasting, and Dispatch Compendium.

CGS also implemented a job shadowing effort. Job shadow opportunities are available in Coal Services, Commercial Processes and Assurance and Natural Gas. Any CGS employee may take advantage of these opportunities. Currently, 18 employees have completed 31 job shadow opportunities. This effort began in February 2016 and will continue through October 2016.

APPENDIX B
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Thank you for the time your team took to meet with the CGS staff and provide recommendations for improving organizational effectiveness within our group. Please let me know if you have any questions regarding these responses.



David L. Owens, WT 9C-K
Vice-President
Coal and Gas Services



Megan T. Flynn, LP 3A-C
Vice President
Human Resources

Attachment

Cc: (Attachment)
S. E. Collins, LP 6A-C
J. R. Dalrymple, LP 3K-C
W. D. Johnson, WT 7B-K
D. K. Lanier, MR 3K-C
R. W. Morgan, WT 4D-K
C. G. Pardee, WT 7B-K



Employee Survey Results Action Plan

1. Performance Reviews / Rankings

- Quarterly check-ins with employees and managers. Managers will schedule mid-year and end of year reviews. Employee will schedule alternating quarterly reviews.

2. Team Morale / Management Transparency / Trust

- Alternating employee attendance at the C&GS directs staff meeting
- Regular communication of news from upper management staff meetings



3. Generation Gaps

- Knowledge Sharing Sessions / Employee Selected Lunch & Learn Sessions
- Outside speakers and learning opportunities

4. Developmental Opportunities

- Monthly job shadowing sign-up slots
- Discussion of career goals with managers in employee initiated quarterly reviews

