



Memorandum from the Office of the Inspector General

May 5, 2020

Stacey L. Parrott

REQUEST FOR FINAL ACTION – EVALUATION 2019-15627 – ORGANIZATIONAL EFFECTIVENESS – HYDRO GENERATION ROLLUP

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.

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 the evaluation.

A handwritten signature in black ink that reads "David P. Wheeler".

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

NKK:KDS

Attachment

cc (Attachment):

TVA Board of Directors
Allen A. Clare
Susan E. Collins
Megan T. Flynn
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OIG File No. 2019-15627



Office of the Inspector General

Evaluation Report

To the General Manager,
Hydro Generation

ORGANIZATIONAL EFFECTIVENESS – HYDRO GENERATION

Auditor
Noel K. Kawado

Evaluation 2019-15627
May 5, 2020

ABBREVIATIONS

COO	Chief Operating Officer
FY	Fiscal Year
GM	General Manager
Hydro	Hydro Generation
NE	North Eastern
PO	Power Operations
RM	Raccoon Mountain
SW	South Western
TVA	Tennessee Valley Authority

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Evaluation 2019-15627 – Organizational Effectiveness – Hydro Generation Rollup

EXECUTIVE SUMMARY

Why the OIG Did This Evaluation

Organizational effectiveness, as defined in this evaluation, is the ability of an organization to achieve its missionⁱ and goals. To achieve and sustain organizational effectiveness, there should be alignment between strategy, team engagement, and operational performance. 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. The Tennessee Valley Authority's (TVA) 2018 Risk Assessment Summary recognized that (1) workforce strategy and management risksⁱⁱ and (2) workplace environment risksⁱⁱⁱ could negatively affect the performance environment.

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 TVA. Hydro Generation (Hydro), a business unit falling under Power Operations (PO), is comprised of four regional Hydro organizations—Central, North Eastern, Raccoon Mountain, South Western—as well as the Hydro Dispatch Control Center. We previously assessed these areas to identify strengths and risk that could impact their organizational effectiveness. The objective of this evaluation was to identify strengths and risks that could impact Hydro as a whole.

What the OIG Found

Based on our review of results of the prior evaluations in the five Hydro areas and additional interviews and data analyses conducted in this evaluation, we identified strengths that positively affected the day-to-day activities of Hydro, as a whole. These strengths included, (1) organizational alignment, (2) positive interactions within and outside of Hydro, (3) effective leadership, and (4) positive ethical culture. We also identified risks that could impact Hydro's ability to meet its responsibilities in support of PO's vision. These were comprised of risks related to (1) lack of effective accountability by management, (2) inadequate staffing, (3) training needs, and (4) other resources, including adequacy of

ⁱ According to the General Manager, Hydro, PO's previous mission was simplified and changed to a vision, both of which contain very similar language and objectives. The evaluations described in this report were based on PO's previous mission. Because the substance and content of the prior mission and current vision are essentially the same, we use those terms interchangeably throughout this report.

ⁱⁱ Workforce strategy and management risks include failure to manage key leadership transitions, ineffective talent management, and performance management shortfalls.

ⁱⁱⁱ Workplace environment risks include lack of organizational adaptability, lack of inclusion and employee engagement, and inappropriate workplace incidents.



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equipment, infrastructure, supplies, and/or workspace conditions. See Figure 1 for a summary of results across the five Hydro areas.

	Central	North Eastern	Raccoon Mountain	South Western	Hydro Dispatch Control Center
Strengths:					
Organizational Alignment	✓	✓	✓	✓	✓
Positive Interactions Within and Outside of Hydro	✓	✓	✓	✓	✓
Effective Leadership	✓	✓	✓	✓	✓
Positive Ethical Culture	✓	✓	✓	✓	✓
Risks:					
Accountability		✓			✓
Staffing	✓	✓	✓	✓	✓
Training	✓			✓	
Other Resources	✓			✓	✓

Figure 1

In addition, we requested feedback from personnel in other TVA organizations that have regular interactions with Hydro personnel. Based on feedback that was received, we identified concerns related to reliability, collaboration/coordination of work, and staffing that could have a negative impact on Hydro’s ability to execute PO’s vision.

Based on our observations and using TVA’s Business Operating Model, we assessed Hydro’s level of risk in the areas of alignment, engagement, and execution. We determined:

- Alignment risk is rated low based on alignment of employee goals with those of management as well as TVA’s Values and Competencies. Performance goals also aligned to Hydro initiatives, which supported PO’s and TVA’s missions.
- Engagement risk is rated low. While accountability concerns were expressed at two areas, most individuals expressed positive comments about their relationships with other employees and first-line management.
- Execution risk is rated medium based on Hydro personnel concerns related to inadequate staffing, training and other resources. In addition, concerns from personnel in other organizations related to



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reliability, collaboration/coordination of work, and staffing could have a negative impact on Hydro's ability to execute PO's vision.

	Low Risk	Medium Risk	High Risk
Alignment	X		
Engagement	X		
Execution		X	

What the OIG Recommends

We recommend the General Manager, Hydro:

1. Continue to assess inadequate staffing concerns.
2. Address collaboration/coordination and asset reliability concerns based on feedback from other TVA organizations.

TVA Management's Comments

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

Auditor's Response

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 mission¹ and goals. To achieve and sustain organizational effectiveness, there should be alignment between strategy, team engagement, and operational performance. 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, the Tennessee Valley Authority (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. TVA's 2018 Risk Assessment Summary recognized that (1) workforce strategy and management risks² and (2) workplace environment risks³ could negatively affect the performance environment.

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 TVA. Hydro Generation (Hydro) is a business unit falling under Power Operations (PO) whose vision is to safely produce reliable, low-cost, cleaner power for the changing needs of the Tennessee Valley. As shown in Figure 1 below, Hydro is comprised of four regional Hydro organizations—Central, North Eastern (NE), Raccoon Mountain (RM), South Western (SW)—as well as the Hydro Dispatch Control Center (HDCC).

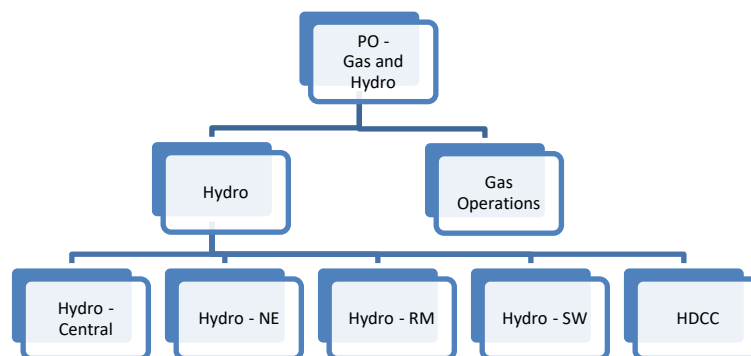


Figure 1

¹ According to the General Manager (GM), Hydro, PO's previous mission was simplified and changed to a vision, both of which contain very similar language and objectives. The evaluations described in this report were based on PO's previous mission. Because the substance and content of the prior mission and current vision are essentially the same, we use those terms interchangeably throughout this report.

² Workforce strategy and management risks include failure to manage key leadership transitions, ineffective talent management, and performance management shortfalls.

³ Workplace environment risks include lack of organizational adaptability, lack of inclusion and employee engagement, and inappropriate workplace incidents.

According to TVA's 2019 Form 10-K, as of September 30, 2019, Hydro maintained 29 conventional hydroelectric dams that included 113 generating units located throughout the Tennessee Valley. These units accounted for 3,784 megawatts of summer net capability.⁴ In addition, TVA has four units at the RM Pumped Storage Plant, having a total net summer capability of 1,616 megawatts. According to TVA, hydro's contribution to TVA's power supply has gradually been increasing, from 7 percent in fiscal year (FY) 2017 to 10 percent in FY 2019.

Hydro is comprised of various functions to help support achievement of its goals and initiatives. At four of the Hydro areas (Central, NE, RM, and SW), staffing includes Hydro Technician levels II, III, and/or IV, as well as laborers who report to a plant manager responsible for operations and/or maintenance activities. In addition, personnel responsible for supporting each of these four areas include engineers, business support representatives and/or regional hydro support supervisors, who, in addition to the plant managers, report to one of the four Senior Managers. At HDCC, staffing is comprised of coordinators who report to the HDCC Manager. The four Senior Managers and the HDCC Manager report to the GM, Hydro. The GM, Hydro reports to the Vice President, PO – Gas and Hydro.

During FY 2019, Hydro tracked metrics related to people, operations, finance, and stewardship. Specifically, people-related metrics include number of injuries, number of human performance events, and number of observations performed. Metrics related to operations include equivalent forced outage rate,⁵ equivalent availability factor,⁶ and the number of unit trips. Finance metrics include capital, nonfuel operations and maintenance, and total spending, as well as changes in nonfuel inventory. Stewardship metrics include those related to environmental compliance and continuous improvement activities.

As of February 4, 2020, Hydro had 239 employees, including 1 GM, 4 senior managers, 14 managers (including plant managers), and 220 other employees.

OBJECTIVE, SCOPE, AND METHODOLOGY

During calendar year 2019, we performed evaluations of Hydro's four regional organizations—Central, NE, RM, and SW—as well as HDCC, to identify strengths and risks that could impact organizational effectiveness in those areas. The objective of this evaluation was to identify strengths and risks that could impact Hydro's organizational effectiveness, as a whole. We assessed operations from

⁴ Net capability is defined as the ability of an electric system, generating unit, or other system component to carry or generate power for a specified time period and does not include operational limitations such as derates.

⁵ This is defined as the percentage of generation lost due to forced outages with respect to the total generation capability for a period that a unit is not planned to be offline. Forced outages are unplanned outages caused by equipment failures or problems.

⁶ Equivalent availability factor reflects the percentage of available capacity within a defined period.

April through December 2019 and culture based on interviews conducted from January 2019 through February 2020. To complete the evaluation, we:

- Reviewed our final issued reports⁷ for Hydro's four regional organizations—Central, NE, RM, SW—as well as HDCC, to identify themes of organizational strengths and risks across those five areas of Hydro.
- Conducted individual interviews with certain Hydro and PO employees, including management, and analyzed those results concurrently with the organizational effectiveness themes identified across the five areas of Hydro.
- Reviewed PO's and Hydro's FY 2019 through FY 2021 business plans and TVA's FY 2019 through FY 2021 Business Plan Summary to determine whether goals and initiatives aligned with those of PO and TVA.
- Analyzed FY 2018 performance documentation of Hydro and PO leadership to verify alignment between different levels of management and with organizational goals and/or initiatives.
- Examined financial information from FY 2017 to FY 2020, through January, to gain an understanding of capital and operations and maintenance expenditures that could affect the work environment.
- Reviewed TVA values and competencies (see Appendix A) for an understanding of cultural factors deemed important to TVA.
- Reviewed select (1) TVA and PO Standard Programs and Processes and other documentation to gain an understanding of processes and (2) laws and regulations to gain an understanding of the requirements of the organization.
- Selected 411 individuals from other TVA organizations,⁸ based on information from Hydro personnel and auditor judgment, who were identified as having regular interactions with Hydro personnel to obtain feedback on those interactions. We received feedback through survey responses and/or interviews from approximately 45 percent⁹ of the individuals.
- Compared Hydro's overall strengths and risks to the 2018 TVA Employee Engagement survey (EE survey) to determine how certain aspects of Hydro has fared since that survey.

⁷ Evaluation 2019-15627-01, *Organizational Effectiveness – Hydro Generation, South Western Region*, August 5, 2019. Evaluation 2019-15627-02, *Organizational Effectiveness – Hydro Generation, North Eastern Region*, August 23, 2019. Evaluation 2019-15627-03, *Organizational Effectiveness – Hydro Generation, Central Region*, January 23, 2020. Evaluation 2019-15627-04, *Organizational Effectiveness – Hydro Generation, Raccoon Mountain*, January 21, 2020. Evaluation 2019-15627-05, *Organizational Effectiveness – Hydro Dispatch Control Center*, January 9, 2020.

⁸ Organizations included the River Forecast Center, Transmission Operations (Maintenance), Balancing Authority, Dam Safety, Generation Services (Field Services, Asset Performance, and Engineering and Technical Programs), Power Service Shops, Supply Chain, Generation Projects and Shop Services (Generation Projects and Engineering Design), Financial Services, Facilities Management (Corporate East, Corporate West, Corporate Central, Programs and Projects, and PO and Transmission).

⁹ Responses from individuals in Facilities Management – Corporate Central indicated they had little or no interactions with Hydro personnel. Therefore, our analysis did not include any feedback from this organization.

- Assessed the overall effectiveness of Hydro 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.
 - Engagement – How the organization achieves the highest level of performance from its employees.
 - Execution – How well the organization achieves its objectives and mission.

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

Based on our work performed, we identified strengths that positively affected the day-to-day activities of Hydro, as a whole. However, we also identified risks that could hinder, as a whole, Hydro's effectiveness and its continued ability to meet its responsibilities in support of the PO vision.

STRENGTHS

Based on our review of results of the prior evaluations in the five Hydro areas and additional interviews and data analyses conducted in this evaluation, we identified strengths that positively affected the day-to-day activities of Hydro as a whole. These strengths included (1) organizational alignment, (2) positive interactions within and outside of Hydro, (3) effective leadership, and (4) positive ethical culture.

Organizational Alignment

Our review of FY 2018 performance management documentation for management and employees across all five areas and at the upper management level of Hydro revealed that performance goals were consistent with goals of the individual's respective management as well as TVA's Values and Competencies. Performance goals also aligned to Hydro initiatives, which supported PO's and TVA's missions. Most individuals indicated they understood how their jobs or goals aligned with either the plant, Hydro, PO, or TVA goals and/or mission.

We noted two questions on the 2018 EE survey that related to alignment had high favorability responses. Specifically, the survey questions related to understanding of TVA's goals and objectives and understanding of job responsibilities with

favorability ratings of 73¹⁰ and 93 percent, respectively. Our results indicate continued favorability by Hydro personnel with regard to alignment.

Positive Interactions Within and Outside of Hydro

Across all five areas in Hydro, the majority of employees interviewed provided positive comments related to interactions with coworkers and indicated they trusted their coworkers to do their jobs well. Most individuals also indicated having positive interactions with other departments within the organization. At most areas within Hydro, at least some employees cited teamwork as a driver for positive morale within the organization.

In addition, at each of the five Hydro areas, most or many personnel indicated having positive interactions with others outside the organization. Examples provided of such organizations included Performance Excellence,¹¹ Environmental Operations, and Dam Safety.

Based on the results of the 2018 EE survey for Hydro, we noted that there has been potential improvement as it relates to interactions with other departments within and outside of Hydro. Specifically, the favorability response for Hydro to a question on the survey related to cooperation between different departments was only 43 percent. With regard to coworker relationships, we noted general consistency with the EE survey in which Hydro had a favorability rating of 76 percent to a question about “cooperation among employees in their department.”

Effective Leadership

For most individuals, with the exception of HDCC, the Plant Manager¹² is their first-line leadership, and the senior manager serves as their middle management. The senior manager serves as first-line leadership for other individuals, while the Hydro GM serves as their middle management. At HDCC, the Manager functions as the first-line leader for all personnel in HDCC, and the GM serves as their middle management. Within all of the five Hydro areas, most individuals indicated having positive relationships with their first-line management. Specifically, most employees provided positive comments pertaining to first-line leadership in the areas of communication, trust, and/or recognition. In addition, most employees in Hydro indicated they felt comfortable reporting concerns or sharing a differing opinion with their first-line management.

Based on the results of the 2018 EE survey for Hydro, we noted there has been potential improvement in certain aspects of effective leadership. Specifically two questions on the survey, (1) employees in the department trusting management (managers below the Vice President) and (2) comfort in raising concerns to management without fear of retaliation, had favorability ratings of only 49 and

¹⁰ The 2018 EE results provided the aggregate percentage of favorable, unfavorable, and neutral ratings for each survey question. The total of these percentages equaled 100.

¹¹ This organization was previously named Safety Operations.

¹² This includes the Maintenance or Operations Plant Manager at RM.

61 percent, respectively. Similarly, a question about recognition for contributions when things go well had a favorability rating of only 41 percent.

Positive Ethical Culture

Employees and management are charged with conducting business according to the highest ethical standards and seeking to earn the trust of others through words and actions that are open, honest, and respectful. Ethical culture is defined in this evaluation as the “shared concept of right and wrong behavior in the workplace that reflects the true values of the organization and shapes the ethical decision making of its members.”¹³ The majority of employees interviewed across all five Hydro areas indicated that the ethical culture in their department and/or organization was positive.

RISKS

Based on our review of results of the prior evaluations in the five Hydro areas, along with additional interviews and data analyses conducted, we identified risks that could hinder, as a whole, Hydro’s effective execution and its continued ability to meet its responsibilities in support of PO’s vision. These were comprised of risks including (1) lack of effective accountability by management and (2) execution-related concerns related to inadequate staffing, training needs, and other resources, including adequacy of equipment, infrastructure, supplies, and/or workspace conditions. We also requested feedback from personnel in other TVA organizations that, based on information from Hydro personnel and auditor judgment, have regular interactions with Hydro personnel. Based on feedback that was received, we identified concerns related to reliability, collaboration/coordination of work, and staffing that could have a negative impact on Hydro’s ability to execute PO’s vision.

Lack of Effective Accountability

At two of the five Hydro areas we evaluated, employees expressed concerns related to accountability by first-line management. At NE, several employees across various plants indicated that Plant Managers may not be holding employees accountable. Reasons provided by Hydro personnel for the perceived lack of accountability included avoiding confrontation and Plant Managers not spending much time at the site,¹⁴ which could make accountability difficult. While a few Plant Managers stated that Technician IVs are placed in charge when they are not at the site, several employees indicated that Technician IVs cannot hold employees accountable. We confirmed, based on TVA documentation, that Technician IVs do not have disciplinary authority. In its response to this concern, Hydro management indicated it would identify leadership training needs and clarify roles and responsibilities. In addition, among other planned actions, management stated it would conduct monthly senior manager one-on-ones with

¹³ S. P. Robbins and T. A. Judge, *Organizational Behavior*, 18th edition, 2019.

¹⁴ In addition, a couple of Plant Managers indicated that they have a lot of administrative tasks that takes away time from their plant duties.

plant managers to discuss employee attendance and job performance and review any accountability-related actions for effectiveness.

At HDCC, several employees expressed the need for a more appropriate method of accountability by management. For example, some employees indicated that peer-to-peer accountability is encouraged rather than direct accountability from management. Management's planned actions to address this concern included holding meetings with each individual HDCC Production Coordinator to discuss the concept of peer-to-peer accountability, including the process for elevating issues that cannot be resolved.

Based on our review of the 2018 EE survey, we noted that Hydro's group responses to questions related to accountability generally had somewhat low to average ratings, which could be consistent with the accountability risk we identified. Specifically, questions about whether employees are held accountable for the work they produce or fail to produce and whether poor performance is not tolerated had favorability ratings of only 50 and 27 percent, respectively. In addition, questions about rating your immediate manager/supervisor on letting you know what kind of job you are doing, dealing fairly with everyone (playing no favorites), and whether clear feedback is received on performance, had favorability ratings of only 65, 63, and 67 percent, respectively.

Execution-Related Concerns

While most individuals at each of the five Hydro areas indicated they had the tools needed to perform their work, we also identified potential impediments to the effective execution of work. Specifically, concerns were expressed around inadequate staffing, training needs, and other resources, including adequacy of equipment, infrastructure, supplies, and/or workspace conditions.

Perceptions of Inadequate Staffing

At NE, RM, SW, and HDCC several employees expressed concerns around inadequate staffing, while some employees voiced similar concerns at Central. At Central, NE, RM, and SW, concerns were expressed that the current staffing levels negatively impacted the ability to complete work. For example, at Central, NE, and SW, a few employees at each of these regions, indicated that the current staffing levels made it difficult to comply with procedures or processes after Hydro became a part of PO. In addition, at RM, a few individuals indicated that work orders are sometimes closed without addressing the concerns identified due to a lack of personnel. At HDCC, several employees voiced concerns that night shift can get busy and that it would be helpful to have another individual on night shift.

In the response to our NE, RM, and SW recommendations around inadequate staffing, Hydro senior leadership stated it was working with PO's leadership on a work management initiative to include an evaluation of workload and associated resource levels. Hydro senior leadership indicated that, ultimately, a resource management strategy would be developed to meet the business needs of the organization while aligning with business goals and targets. Regarding HDCC,

management stated that the current workload does not warrant additional staffing; however, it would communicate to employees that additional staffing is available for night shift when needed.

Based on our review of the 2018 EE survey, we noted general consistency of our evaluation results with the EE survey results as it relates to adequacy of staffing. Specifically, Hydro employees gave an overall favorability rating of only 32 percent when asked to rate TVA on having enough qualified people to do the work in your department.

Training Needs

Concerns related to training needs were expressed at Central and SW. In both regions, several employees indicated the need for continuing education or refresher training in technical areas. In addition, several employees at SW and a few employees at Central expressed concerns around the lack of training related to programs or processes (such as Maximo,¹⁵ Microsoft Excel, and/or the clearance-writing process). At Central, several employees indicated that the Technician II training program did not adequately equip trainees to perform work in Hydro. Specifically, some employees indicated the need for further training for Technician II employees, with a few employees expressing concerns about their co-workers' abilities to perform work and troubleshoot problems.¹⁶ Finally, several employees at SW indicated that additional training on new equipment or technical skills would be beneficial. In its response to our recommendations related to this concern, Hydro management stated that it would address training needs for employees, including the identification of leadership training for Technician IVs and plant managers, clarification of roles/responsibilities and training offerings in technical areas. In addition, Central management stated that Hydro senior leadership would work with current trainees in the Technician II program to assess the effectiveness of recent changes to the program.

As part of our review of the 2018 EE survey, we noted that the overall Hydro rating for the question related to training on the EE survey was low, which could be consistent with the training risk we identified. Specifically, the EE survey question about rating TVA on providing training so that you can handle your present job properly had a favorability rating of only 41 percent.

Other Resources

Other resource-related concerns identified related to equipment, infrastructure, supplies, and/or workspace conditions. At Central, concerns were brought up around the safety of unrepaired equipment or assets. Specifically, a concern was expressed about a crane at Nickajack Hydro that used a bungee cord to hold the attachment of the crane in alignment. According to Nickajack Hydro personnel, the bungee cord had been used for a while and they believed that if it broke, injuries could occur. After being notified of the issue, Hydro management stated

¹⁵ Maximo is an asset management lifecycle and workflow process management system.

¹⁶ According to Hydro management, feedback from plant management and Technician IVs was obtained in 2018 and changes were made to the 2019 program curriculum.

that the crane would be removed from service pending corrective actions to ensure its safe operation. In addition, a few employees indicated safety concerns with the stairs and access road to the flume at Ocoee No. 2. Documentation was provided showing that a flume road project had been approved in July 2018 with an estimated in service date of July 2020. The documentation indicated the project would ensure reliable and safer access to the flume.

At SW, several employees across multiple plants expressed concerns with having necessary materials, including equipment and supplies to perform their work. Specifically, some employees described frustrations with timely receipt of materials from an outside vendor or expressed concerns with the ordering and/or tracking process for obtaining equipment and parts. In its response to our report for SW, management stated it would engage Asset Support and evaluate current planning and scheduling to ensure material is available when needed.

Finally, at HDCC several employees indicated that the noise level in their workspace, coupled with their seating arrangement, hindered efficient work-related communications between HDCC personnel. A few individuals also indicated that they previously sat in a different location, which was more conducive to efficient communication. Management's response to our report stated the Hydro and Transmission teams would meet to discuss possibilities for relocating HDCC to a more optimal location.

Hydro employees rated the adequacy of resources as somewhat average on the 2018 EE survey, which could be consistent with the other resource risks we identified. Specifically, the overall favorability rating related to the question about whether TVA provides the necessary resources to do quality work was only 62 percent.

Partner Feedback

As previously discussed, we requested feedback from personnel in other TVA organizations that, based on information from Hydro personnel and auditor judgment, have regular interactions with Hydro personnel. Our survey requested individuals to rate Hydro on three areas: (1) quality of feedback and communication, (2) timeliness in responding to requests/needs, and (3) working relationships.¹⁷ In addition, respondents were given the opportunity to provide specific comments. Based on survey responses, at least half of the respondents provided positive (four or greater) ratings in all three areas. Example comments provided by some respondents included Hydro personnel being professional. However, respondents also offered areas for improvement. These areas related to reliability, collaboration/coordination of work, and staffing.

Equipment and Unit Reliability

Several survey respondents expressed concerns about reliability regarding equipment and assets. Some of the concerns expressed related to the

¹⁷ We requested individuals to provide an overall rating (1, 2, 3, 4, or 5) on these three areas, with one being least favorable and five being the most favorable.

unreliability of equipment and/or units and the need to address equipment and asset issues. Also, inadequate funding for Hydro was expressed as a concern by several individuals. Some of the concerns in this area focused on increasing funding to help improve reliability and/or asset conditions.

Collaboration/Coordination of Work

As previously mentioned, Hydro personnel interact with several different organizations to accomplish PO's vision. As such, effective collaboration and coordination of work between groups could be conducive to meeting those aims. Many survey respondents indicated that collaboration and coordination of work could be improved. The most common area for enhancement expressed was for Hydro to provide lead-time when requesting support from other organizations. More notice about support needed from Hydro could help other organizations better plan for that support as well as their other responsibilities.

Several individuals also indicated that Hydro personnel need a better understanding of roles and responsibilities between Hydro and other organizations, or that Hydro personnel should be more adaptable to change and/or open to getting support. Improvements in these areas could help alleviate concerns related to collaboration/coordination of work.

Finally, some individuals indicated that outages last longer than scheduled, while some other respondents expressed concerns with the outage planning/execution process. Improvements in collaboration/coordination could, in our opinion, help to ease concerns related to the outage planning/execution process and minimize the duration of outages, both of which could help to strengthen Hydro's ability to be responsive to the demands of the power system.

Staffing

Many survey respondents indicated their belief that Hydro staffing could be improved. While several individuals indicated that staffing at the plants in general could be increased, a few individuals expressed that staffing could particularly be increased during outages. As previously described, some individuals expressed concerns with untimely completion of outages and increasing staffing could help ease that concern. Another area for improvement expressed was increasing Hydro engineering staff. This feedback is consistent with the risk we identified related to Hydro employees' perceptions of inadequate staffing, as previously discussed.

CONCLUSION

Because Hydro is responsible approximately for 10 percent of TVA's overall power supply, it is a necessary component in assisting PO with achievement of its vision of reliable, low-cost, and cleaner power. While interviews with employees and/or analyses of data revealed the existence of organizational alignment, positive interactions within and outside of Hydro, first-line leadership strengths, and a positive ethical culture, engagement-related improvements

related to accountability by management, and execution-related improvements around staffing, training and other resources could be made to aid in achievement of PO's vision. In addition, feedback from other organizations disclosed execution-related risks related to reliability, collaboration/coordination of work, and staffing.

Since the FY 2018 EE survey and based on our evaluation results, Hydro has potentially improved in several areas of engagement. These include employee trust with management, employee recognition, employees' ability to raise concerns to management without fear of retaliation, and cooperation between different departments.

Based on our observations and using TVA's Business Operating Model, we assessed Hydro's level of risk in the areas of alignment, engagement, and execution. We determined:

- Alignment risk is rated low based on alignment of employee goals with those of management as well as TVA's Values and Competencies. Performance goals also aligned to Hydro initiatives, which supported PO's and TVA's mission.
- Engagement risk is rated low. While accountability concerns were expressed at two areas, most individuals expressed positive comments about their relationships with other employees and first-line management.
- Execution risk is rated medium based on Hydro personnel concerns related to inadequate staffing, training, and other resources. In addition, concerns from personnel in other organizations related to reliability, collaboration/coordination of work, and staffing could have a negative impact on Hydro's ability to execute PO's vision.

RECOMMENDATIONS

We recommend the GM, Hydro:

1. Continue to assess inadequate staffing concerns.

TVA Management's Comments – Hydro senior leadership team performed a staffing analysis of hydro resources and associated workloads, which was presented, along with a business case, to PO's executive leadership in April 2020. PO's executive leadership will consolidate FY 2021 through FY 2023 business plans from the various organizations within PO and present a consolidated PO FY 2021 through FY 2023 business plan at the Chief Operating Officer (COO) level. Funding requests will be prioritized at the COO level and managed within the financial targets allocated at the COO level.

In addition, PO is aligning with an overarching COO-level work management initiative, which is intended to meet outage commitments and ensure TVA's ability to maintain reserves for the electric system. Hydro is developing a work management process that aligns with the COO and PO initiatives. This process will include improved resource planning and work execution to optimize existing resources and help the Hydro fleet to better understand resource needs and aid in planning, scheduling, and work execution. See Appendix B for TVA management's complete response.

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

2. Address collaboration/coordination and asset reliability concerns based on feedback from other TVA organizations.

TVA Management's Comments – Hydro management stated it expects the alignment of PO's work management process will allow for better planning and execution of work and support needs by their teams. Requests will get prioritized and have visibility along with accountability in execution.

In addition, Hydro management indicated that its leadership team has worked with Leadership and Organizational Development to strengthen leadership competencies of plant managers and Technician IVs to enhance leadership skills. The curriculum Leadership and Organizational Development utilizes reinforces teamwork and communication with teams and enables Hydro's leaders to work toward alignment and better communication of direction and basis for decisions in the organization. Hydro expects to continue delivering leadership training in the FY 2021 through FY 2023 business plan cycles. See Appendix B for TVA management's complete response.

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

April 30, 2020

David P. Wheeler, WT 2C-K

REQUEST FOR COMMENTS – DRAFT EVALUATION 2019-15627 – ORGANIZATIONAL
EFFECTIVENESS – HYDRO GENERATION ROLLUP

The following is in response to your memorandum dated April 13, 2020. An Organizational Effectiveness review of the Hydro Operating regions and support organizations was conducted by the Inspector General's office. The Hydro organization utilizes its Power-To-Win plan to measure performance in specific focus areas. Where performance does not meet targets or expectations, measurable action plans are developed to close those gaps. These action plans are reviewed monthly as well as the fiscal year end, and actions are adjusted as needed to achieve desired results. These plans were also reviewed during the organizational effectiveness reviews.

RECOMMENDATIONS

We recommend the General Manager, Hydro:

1. Continue to assess inadequate staffing concerns.

Response Action

The Hydro senior leadership team has performed a staffing analysis of the hydro resources and associated work loads. This analysis and business case were presented at the FY21-23 Business Plan for Hydro to the Power Operations executive leadership team (PO-ELT) on April 22, 2020. PO-ELT will consolidate FY21-23 Business Plans and funding requests from the various organizations within Power Operations and present a consolidated PO FY21-23 Business Plan at the COO level. All COO Business Units business plans will then be evaluated and any additional funding requests will be prioritized at the COO level. While there is supporting evidence of additional staffing needs, those needs will be weighed against other business needs across Power Operations and managed within the financial targets allocated at the COO level.

In addition to the staffing analysis that has been performed, Power Operations is aligning with an overarching COO-level work management initiative. This initiative is intended to meet outage commitments and ensure TVA's ability to maintain reserves for the electric system. Hydro is developing a work management process that aligns with the COO and Power Operations improvement initiatives. This process will include improved resource planning and work execution to optimize existing resources. This work management process will help the hydro fleet to better understand resource needs and aid in planning, scheduling and work execution.

David P. Wheeler
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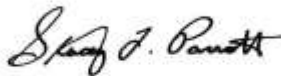
2. Address collaboration/coordination and asset reliability concerns based on feedback from other TVA organizations.

Response Action

The organizational effectiveness review found risks associated with the quality of feedback, timeliness of response and cultural mindsets related to the hydro organization as it relates to the assets. Resource limitations have impacted the quality, timeliness and planning to support these issues. It is expected that alignment of the Power Operations work management process will allow for better planning and execution of work and support needs by our teams. Requests will get prioritized and have visibility along with accountability in execution.

The cultural mindset that can be found at times in Hydro is a proud legacy of a team which has been integrating into a generation organization over the last few years. Hydro operations had primarily functioned and was aligned organizationally to a River Resources, Land Management and Navigation organization where there are different focus areas. The Hydro leadership team has worked with the Leadership & Organizational Development (L&OD) to strengthen leadership competencies of the plant managers and the technician IV classifications in an effort to enhance the leadership skills of these front line leaders. The curriculum L&OD utilizes reinforces teamwork and communication with our teams. These competencies enable our leaders to work toward alignment and better communication of direction and basis for decisions in the organization. Hydro expects to continue delivering leadership training with the plant manager and technician IV level in the FY21-23 business plan cycles.

Thank you for allowing us to provide these comments. If you need additional information, please let us know.



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General Manager
Hydro Operations
LP 3K-C

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