



## Description of Controls Provided by **Pulaski Electric System**

### Scope of the Report

This report has been prepared to provide information on specific system controls of Pulaski Electric System's Network Operations Center. Information not covered in this report can be provided upon request. This examination was conducted in accordance with the guidance contained in the American Institute of Certified Public Accountants ("AICPA") Statement on Auditing Standards No. 70, *Service Organizations*.

### Company Overview

Pulaski Electric System's (PES) primary mission is to provide its customers with the most reliable utility services at the least practical cost in a professional and courteous manner. PES was created in 1891 to serve electricity to the City of Pulaski, Tennessee. Owned by the City, PES is governed by a Board of Directors that consists of five members who are appointed by the Mayor and Board of Alderman.

Owned by the citizens it serves, it offers low, non-profit rates reflecting its mission of quality customer service. PES continues to explore new ideas to improve its performance and add value to its service. The administrative offices of PES are located in Pulaski, Tennessee.

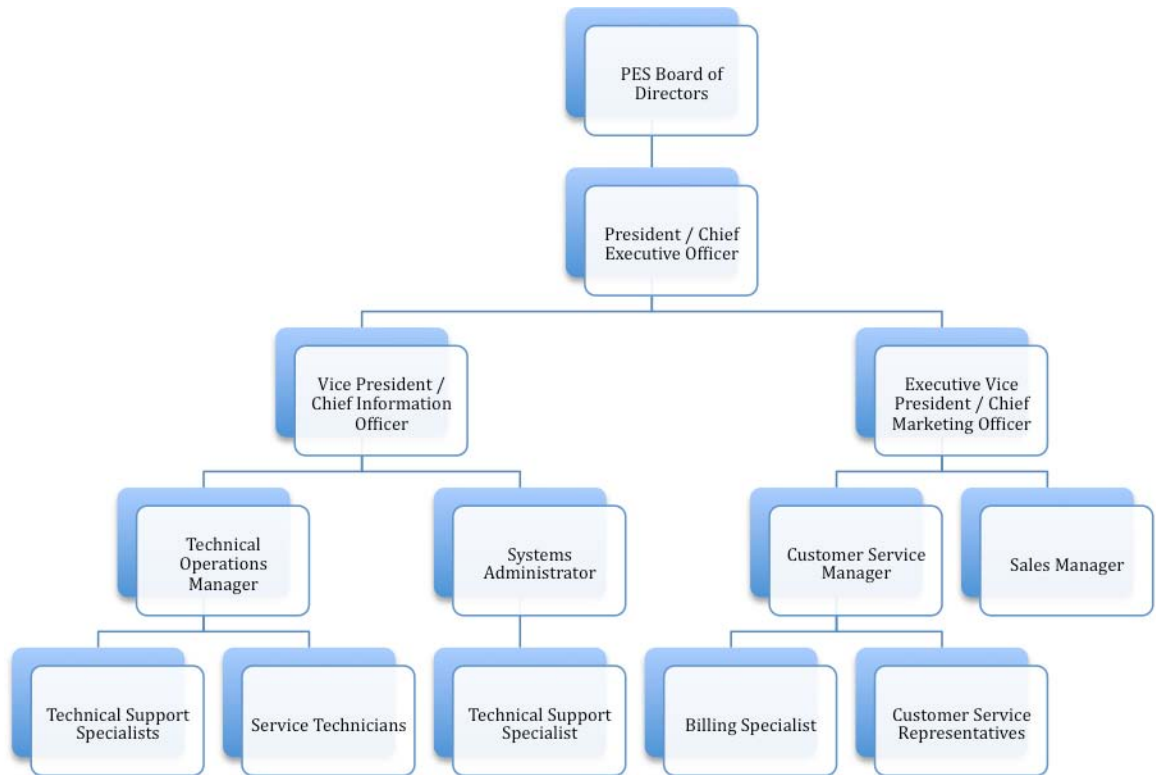
In 2005, PES created a new division of the company, PES Energize, to provide state-of-the-art telecommunication services. The Network Operations Center (NOC) was constructed to serve as the nerve center of the PES Energize system. The NOC is a safe and secure facility located under the PES building. It contains critical telecom equipment and numerous computer servers and data storage equipment for both internal and external users.

### Control Environment

PES's control environment reflects the overall attitude, awareness, and actions of management, the Board of Directors and others concerning the importance of controls and the emphasis given to controls in the company's policies, procedures, methods and organizational structure.

### *Organizational Structure*

The management structure of PES Energize is summarized below: PES Energize is organized into several departments to ensure that it is operating effectively and efficiently so that its customers receive the highest level of service possible. The functions of the departments are described briefly as follows:



Network Engineering – Responsible for designing and implementing new network technology.

System Engineering – Responsible for designing and building new server technology.

Technical Support – Responsible for handling service problems, activating new services, and troubleshooting customer problems.

Installation and Maintenance – Responsible for the installation and maintenance of network technology.

Customer Service – Responsible for sales, billing and customer relations.



### *Personnel Policies*

PES Energize employs approximately 10 full-time employees and an additional 11 employees having shared responsibilities with PES and PES Energize. Four employees focus on the NOC and its operations and maintenance. Written job descriptions have been established for each position within the company. Hiring policies, a code of conduct for employees and employee benefits are established and governed by the Board of Directors. Additionally, the Board provides expectations through Management that each employee serve the customer with the highest level of professionalism possible.

Management of the system performs background reference checks and vocational evaluations on prospective hires. Contingent employment offers are made to prospective employees pending results of pre-employment drug screening and physical examination.

PES considers it essential for all employees to maintain the highest ethical standards while engaging in business activity inside or outside the company that might affect the reputation of PES.

### *Physical Security*

The NOC is located in a partially underground bunker built to withstand an F5 tornado. The 9,000 square foot facility was built in 2007 using the latest engineering and construction advances. The facility is under round-the-clock surveillance with sixteen cameras monitoring and recording the interior and exterior. The NOC is a secured facility that requires key card access on all doors. All access is logged by the system. Currently, there are two entry points to the facility. The main PES lobby is the primary entrance to the building. Even during normal working hours, all doors from the lobby are secured so that only employees or escorted guests can move through the building. The second entrance is used for maintenance and moving equipment in and out of the facility.

Additionally the NOC is equipped with a pre-action fire protection system utilizing FE-25 dry suppression gas as the primary extinguishing agent. Only once the gas is deployed, and if heat is still detected, will the water sprinkler release. The water sprinkler pipes remain dry until the gas system has fully discharged. The fire protection sensors are both smoke-and heat-based detectors located overhead and under the raised floor. The secondary water sprinkler system will not release water unless the primary agent failed to extinguish the fire.

Three-phase electrical power is delivered through a redundant-feed underground distribution system. All electrical power within the NOC is provided through an MGE power distribution system protected with an online UPS system. A backup generator is onsite, and located within a protected underground enclosure. The generator has a 750-kVA capacity large enough to power the entire NOC. Fuel for the generator is located onsite. A remote fueling station has been set up outside the facility so the local fuel distributor can fill the tank quickly. The backup generation system is tested once every week.



The NOC has a separate Fiber Termination Room where all fiber cables enter the facility. All utility services, including communication cables, are buried. Currently there are three long-haul network providers in the facility. Within the main NOC room, a raised floor system provides access to the A&B power circuits, and overhead there are separate fiber optic and copper cable trays.

The NOC has three Leibert HVAC units with a 90-ton capacity. Two serve as the primary cooling and humidity control within the facility, and a third serves as backup. The racks are laid out in a hot aisle / cold aisle arrangement. This ensures proper air circulation. The HVAC system is monitored 24 hours a day and the system is regularly maintained by an outside service provider. The HVAC system maintains a constant 65 degrees and 45% humidity throughout the NOC.

The entire facility has a fully functional fire and burglar alarm system installed. The system is monitored 24 hours a day. The local police department is located one block from the facility, and the nearest firehouse is only four blocks away.

#### *Logical Security*

All customers and visitors to the NOC must sign in and out of the facility, and be escorted by authorized personnel.

Each rack in the NOC has its own locks and can be fully enclosed by installing side panels. This will allow for maximum security per rack or multiple racks depending on the need. Additionally each rack may have a security camera or motion sensor installed to increase security.

Servers housed within the NOC can be protected by individual firewalls, dedicated subnets and/or VLANs. Customers' data can be separated and protected from other customers. Some may wish that their data only go through a dedicated path to their facilities, while others want their data accessible to the Internet; PES Energize can accommodate either approach.

PES protects all its data through hardware firewalls to protect its internal network from unauthorized access via the Internet.

#### *Risk Assessment*

PES has implemented a risk assessment process to identify and manage risks that could affect its ability to provide reliable services to their customers. This process requires Management and the Board to identify significant risks in their respective areas of responsibility and to implement appropriate measures to address those risks. Management and the Board meet regularly to review changes and assess risks that could affect services to its customers.



## Information and Communication

PES has adopted an Information Security Policy that serves as a foundation for classifying and protecting information of all types. All employees with computer access are required to read, understand and follow this policy. The NOC operates under the security policies established through the PES Information Security Policy.

Additionally, PES has an NOC Access Policy. This policy requires all customers permitted to house data within the facility sign a co-location contract and agree to be bound by the PES Energize Acceptable Use Policy.

## Monitoring

PES Management monitors the quality of internal control as a normal part of their activities. To ensure that the company is performing properly Management reviews various areas of the company on a regular basis to ensure that the performance level of PES is being kept at the highest level possible. Additionally, Management reviews various service-level management reports that measure the results of various processes involved in processing transactions for the PES's customers. If these reviews reveal areas where the company is not performing up to Management's expectations, appropriate personnel are notified and action is taken as necessary.