

**UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

**Technical Conference on Critical Infrastructure Protection Supply Chain Risk
Management
Docket No. RM15-14-000**

**Prepared Statement of Dave Whitehead, Vice President of Research and Development
Schweitzer Engineering Laboratories**

January 28, 2016

Good afternoon members of the Commission Staff. I am Dave Whitehead, Vice President of Research and Development for Schweitzer Engineering Laboratories, Inc. (SEL). Thank you for providing me with the opportunity to discuss how SEL manages supply chain risk, how we work with our customers to deliver quality products, and why a mandatory standard could limit the ability of registered entities to mitigate risks from their supply chains.

SEL partners with customers around the world to ensure the safe, reliable, and economical delivery of electric power. We design, manufacture, and support a complete line of products and services, ranging from generator and transmission protection to distribution automation and control systems. We are a 100 percent employee-owned company and have been manufacturing our products here in the United States since SEL was founded more than 30 years ago. SEL's core values, which can be summarized as, "We conduct business the way our mothers would want us to," drive the way we view our community, industry, company, and environment.

One of those core values is SEL's commitment to quality. Managing supply chain risk is a fundamental component of ensuring the quality of the products that we deliver to critical infrastructure owners and operators. SEL's Quality Management System is certified to the International Organization for Standardization (ISO) 9001:2008, Quality Management Systems

Requirements. This certification is evidence that our critical design, manufacturing, and business processes meet the exacting requirements of this internationally recognized standard. Our manufacturing processes comply with the stringent workmanship standard IPC-A-610 Class 3 for products requiring high reliability, such as those used in life-support and aerospace systems.

At SEL, our objective is not to just comply with existing standards; rather, we constantly identify, measure, and improve our processes in order to exceed the expectations of our customers. Our supply chain today is global and complex. Therefore, SEL takes a comprehensive approach in evaluating the risks to our supply chain from the very beginning. Using a rigorous design and part qualification process in the research and development division that I lead, SEL works to evaluate and understand all potential variables of supply chain risk. The following examples are just a few of the ways we work to ensure a dependable supply chain.

We Build Trusted Supply Networks: This past week, SEL hosted our 16th annual Supplier Conference. During this event, which encompasses more than 200 different companies, we explain to our suppliers how the reliable operation of power systems depends on the quality and reliability of SEL products. We share our technical needs and strategic objectives for the coming year and identify ways to partner to ensure the continued supply of quality parts. Attendees include those that supply component parts, equipment, and services. This relationship building continues throughout the year as we conduct onsite audits and inspections of many of our suppliers to ensure their quality and security processes meet our required specifications.

We Rate the Risk of Suppliers: At SEL, we employ a supplier rating system that evaluates every supplier based on price, quality, features, innovation, delivery, and service. The rating includes intelligence from across the company to assess risk variables such as manufacturing locations, material lead times, financial health, replenishment methodologies,

technology type, and performance for on-time delivery. To the greatest extent possible, we source domestically. Additionally, we ask our suppliers to identify their first tier suppliers, along with their key risks, mitigation strategies, and replenishment methodologies. This helps us better rate the risks of our various suppliers.

We Ensure the Integrity of Products: As the Commission noted in the Notice of Proposed Rulemaking (NOPR), product integrity is essential to the protection of the bulk power system. In order to ensure the integrity of the products we deliver to our customers, SEL employs a qualification process for all component purchases. We procure components directly from the manufacturer or official distributors. If components must be purchased outside of this prescribed process, we take additional steps to ensure integrity: we X-ray, inspect packaging, and consult the manufacturer's design drawings.

Throughout the manufacturing process, we are constantly testing our products. If variations in performance are found, we work to understand the root cause of that variation. We have also developed methods to detect counterfeit products.

We develop the majority of our own software. If we use third-party software, we acquire the source code. Products go through numerous peer reviews. We also use automated tools for inspecting code in order to identify potential issues developers may have missed.

Finally, when selecting transportation and shipping suppliers, we use the same supplier qualification processes that we use to select material for our products. This helps ensure the secure delivery of products to our customers.

We Collaborate With Our Customers: We regularly host our customers at SEL's facilities so they can inspect, first hand, our supply chain security risk management practices, our product testing efforts, and our quality processes. Throughout the procurement process, SEL

works to understand the supply chain security and compliance needs of our customers so that we may help them achieve their specified goals and/or requirements. We participate in various government-led initiatives and standards development activities so we can be cognizant of other's current best practices, contribute to industry best practices, and stay attuned to the evolving demands placed on our customers. Similarly, we contribute to and use guidance documents, such as the NIST Cybersecurity Framework, to improve our own processes and controls and help shape agreed upon industry best practices. We keep a detailed list of every product we manufacture so that we know where our products are and can notify the right customers about potential security issues.

We Use the Best Parts of Various Standards to Manage the Risk From Our Supply Chain: I would like to close by stating that SEL does not think a mandatory reliability standard would help registered entities mitigate the risks posed by their supply chains. Giving entities the flexibility they need to manage global and complex supply chain risks is extremely important in this day and age. To do that effectively, we must be able to use any and all tools that are available and improve upon those tools through innovation. Various standards, such as the ones I mentioned earlier and ISO-27001, provide SEL with the tools we need to manage risk from the supply chain. In order to make electric power safer, more reliable, and more economical, we need to be able to move at the speed of business. By their very nature, standards are reactive and often too slow to keep pace with technological development. Being required to adhere to a standard does not allow an entity to proactively mitigate its risks. SEL's culture of continuous improvement and innovation has SEL using the best parts of standards rather than simply settling for what may be required. We want to exceed the status quo and be allowed to invent new ways for mitigating risk and improving quality. It is in the best interest of our customers and their

suppliers not to limit the tools they have available to them to mitigate risks from the supply chain. To that end, we will continue to collaborate with our customers in their efforts to protect their critical infrastructure assets by helping them ensure a dependable and secure supply chain. Thank you again for the opportunity to discuss this important topic today. I look forward to your questions.