

Energy Efficiency and Mission Assurance in the Age of Complexity

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Abstract

Today's environment is characterized by an intense desire to improve energy efficiency that brings with it the potential to realize both cost savings opportunities and oversight, management, and mission assurance challenges. Those that manage campuses and major facilities find themselves effectively operating private micro-grids that co-habitate with, or even integrate with local utilities. The technologies found on these modern campuses and facility sites can include some or all of the following: one or more renewable sources, organic natural gas powered generation systems, storage and recovery systems, advanced distribution systems capable of aligning with dynamic supply and demand scenarios, traditional standby generators, and even localized uninterrupted power systems. The challenge is that the pursuit of efficiency can generate a world of complexity and generate vulnerabilities that can negatively impact mission assurance.

Biography

Dr. Louisell serves as a key member of Cisco's cross-domain strategic solutions team. He is engaged across multiple corporate sectors serving as a leader and collaborator supporting development of technical approaches to address our Department of Defense client's most complex problems.

Dr. Louisell is a licensed Civil Engineer with focused experience in installation infrastructure and facility control systems across all three military departments. Chuck has researched, published, and led implementation of technology-centric infrastructure resiliency solutions in support of federal, state, and local organizations. Specific experience examples include water and wastewater systems, power management for critical facilities, control system segmentation for installations, traffic signal control for critical arterial routes, and air traffic control interfaces between military and civil facilities.

Dr. Louisell has served as a technology development mentor to start-up and small businesses in the Charleston, SC area collaborating with the South Carolina Research Authority's SC Launch Program. He provides technology feasibility assessments, supervises development processes, conducts performance assessments, and designs calibration and validation programs for intelligent system applications. Dr. Louisell has served as Technical Director for federally sponsored Small Business Innovative Research projects.

Since earning his Ph.D. in 2003, Dr. Louisell has maintained an active academic and research agenda having served as a Senior Research Associate and Ph.D. committee member at Virginia Tech, an Adjunct Professor at The Citadel, a Senior Research Associate at the University of Massachusetts (Amherst), and most recently as a Research Fellow at Utah State University.

