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THE RESILIENCE RUNDOWN

My Journey Through More Than Three Decades of the Energy Industry Sectors both Electrical Utility & Oil & Gas

By: Deputy Director Clyde Loll



When people ask me what I've done for a living, the simple answer that I give them is that I've spent more than thirty years working in the energy industry. But that answer doesn't begin to scratch the surface of my experience within these business sectors.

For me, this has never simply been a job. It has been a journey where I sought to help build safe and secure infrastructure that millions of people depend on every day. Plus, along the way it allowed me to lead some incredible men and women whose work often goes unnoticed until something goes wrong. Electricity and energy both have become so much a part of everyday life that most people never stop to think about what it takes to keep homes warm during a winter storm, hospitals operating during a hurricane, industrial complexes running around the clock, or critical facilities functioning without interruption.

Behind every switch that works, every refinery that operates safely, every pipeline that delivers product, and every neighborhood that regains power after a devastating storm are thousands of skilled craft persons working long hours under challenging environments and harsh conditions. I have been fortunate to spend my career among those gifted individuals.

Looking back over the past two decades, I realize my work life has paralleled one of the most transformative periods in the history of the energy industry.

I entered the workforce at a time when experience and craftsmanship were the most valuable tools an employee could possess. Today, the industry combines those same fundamentals with digital technologies, predictive analytics, automation, drones, artificial intelligence, advanced communications, GIS mapping, remote monitoring, cybersecurity, and real-time operational awareness.

While technology has dramatically changed how we perform our work, one thing has remained constant: people are our greatest asset.

So, let me take you back a few years on my journey, which began as an apprentice with an electrical utility company, where I spent numerous years learning not only technical skills but also the importance of accountability, teamwork, and earning the trust of those around me. Those early experiences shaped my leadership philosophy long before I ever supervised an employee. Working in an industry where reliability is critical meant that preparation in the event of some unforeseen event could quickly become an operational challenge, requiring preparation, coordination, and decisive action. At the same time, technology was advancing nearly every aspect of the electric utility industry. Operational and informational (OT/IT) technology changed how operations managed the power grid, communicated with customers, analyzed data, and responded to power outages when they occurred.

I had to continually adapt, learn new systems, and embrace the transformation that was changing right before my eyes. Revelation here, my career has basically been a journey of adapting to change - sometimes planned, sometimes unexpected – and using each experience to become more capable and a better contributor to the industry itself.

As my career progressed, I found opportunities to expand into the oil and gas industry, where I gained experience managing increasingly complex operations both domestically and internationally, along with major capital projects. Along the way, I was entrusted with leading multidisciplinary teams, managing multimillion-dollar budgets, improving health, safety, security and environmental performance, and helping organizations navigate significant industry changes. Drilling operations across the globe required careful, calculated planning, problem-solving, and close coordination among multiple disciplines. Many times, the work involved significant operational risks and the need to make sound decisions while balancing safety, efficiency, cost, and production targets per contractual agreements.

Technology played an increasingly important role in drilling operations. Advances where introduced in drilling equipment, downhole tools, data acquisition, automation and eventually I became a part of a team that developed a robotic-rig, which required less manpower and reduced worker injuries. These advances required operations personnel to continually expand their knowledge and adapt to new ways of working. Personally, learning to understand emerging technology became an important part of my professional development. Reflecting back, my career has been a continuous journey through technological change and challenges operating in high threat level environments across the globe in countries such as Iraq, Yemen, Kuwait, Angola, Kazakhstan, Russia, Uzbekistan, Egypt, India, the Republic of Congo, Venezuela, Saudi Arabia, and The Eastern Mediterranean to give you a flavor of my travels.

I have responded to hurricanes, tornadoes, ice storms, military takeover of operations requiring force majeure, oilfield fires, and countless emergency restoration events where life or death decisions mattered. I have witnessed remarkable technological advancements, economic booms and downturns, regulatory changes, evolving environmental

expectations, and the emergence of entirely new ways of producing and delivering energy.

Through every challenge, one lesson remained clear: the ability to adapt to change is one of the most valuable skills a professional can develop.

Today, the energy industry stands at another crossroads. Grid modernization, renewable integration, data storage, artificial intelligence, predictive maintenance, advanced cybersecurity, carbon management, electrification, and digital operations are reshaping these business sectors faster than ever before. Yet despite all these innovations, success will continue to depend on the same principles that guided my first day as an apprentice: integrity, accountability, technical excellence, teamwork, and an unwavering commitment to safety and security of personnel.

As I reflect on more than thirty years in this business sector, I do so with gratitude. Gratitude for the mentors who invested in me, the employees who trusted my leadership, the organizations that provided opportunities to grow, and the countless colleagues whose dedication continues to inspire me still today and one of the very reasons that I have not officially retired from working.

RESEARCH

Online Research Link



AI-Enabled Self-Healing Supply Chain for Contested Logistics

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Modern logistics systems depend heavily on timely and reliable information, yet major disruptions, cyber incidents, communication failures, and deliberate information manipulation can undermine both data quality and decision-making. This white paper proposes an AI-enabled self-healing supply chain framework designed to maintain decision continuity when information is incomplete, uncertain, or contested.

The framework integrates three interdependent functions: Sense, Trust, and Adapt. Sense monitors network conditions and emerging disruptions. Trust evaluates the reliability of available information and determines the confidence appropriate for a specific decision. Adapt uses this information to generate feasible response options through predictive analytics, optimization, simulation, operating rules, and human judgment. Together, these functions form a governed feedback loop that supports continuous observation, evaluation, response, and adjustment.

The proposed framework offers a practical research foundation for improving logistics resilience in homeland security and other critical operational settings. Its central contribution is a decision architecture that combines situational awareness, information reliability, and adaptive response while preserving human oversight and operational control.

STAFF HIGHLIGHT

Joan Randall
Web Developer



Joan Randall has joined the Institute for Homeland Security as a Web and Media Developer, bringing a background in communications, digital strategy, and content development to the team. She began her career as a newspaper reporter before moving into public health communications with the Texas Department of Health and Human Services. She spent much of her career at the Texas Association of School Boards (TASB), where she held a series of leadership roles within an in-house marketing and communications agency, supporting digital initiatives, content strategy, and marketing across program areas including energy, risk management, and environmental services.

Read More of her background on the IHS Website

EVENTS



IHS Highlights Reels

September 24, 2026

Live Stream Event

Join us for Best in Show: Highlight Reels 2026! Our celebration of the year's standout projects. From breakthrough partnerships to game-changing initiatives we're bringing the best of the year to the big screen for a day of recognition, reels, and reasons to celebrate.

More information: here

PODCAST

Critical Infrastructure & Talking Dogs

WITH Dr. Judy Clemens-Smuckers, Dr. Brandon West & Erik Peterson

School is finally back in session - from college all the way to preschool - and my daughter's long-awaited new favorite movie is in theaters. "Paw Patrol 3: The Dino Movie" presents an offbeat opportunity to talk about kid-friendly portrayals of critical infrastructure protection and careers, and how grown-up portrayals of the same jobs on "NCIS" and "CSI" shape expectations and perceptions among adults. This week, we're joined by one of our new IHS Project Managers, Erik Peterson, along with media and communication faculty Dr. Judy Clemens-Smuckers and Dr. Brandon West.

Link: https://ihsonline.org/ihs-media/podcast