Dion Emami Warns That America's Next Infrastructure Challenge Isn't Equipment—It's Experience

Utility executive Dion Emami says decades of field knowledge are leaving the workforce faster than many organizations can replace them, creating a hidden risk for the future of America's infrastructure.

Los Angeles, California Jun 30, 2026 (Issuewire.com) - Discussions about America's infrastructure challenges often focus on aging transmission lines, outdated substations, and the need for billions of dollars in upgrades. According to utility executive Dion Emami, one of the industry's most significant risks receives far less attention: the loss of institutional knowledge.

As experienced engineers, lineworkers, project managers, and utility leaders retire, decades of practical knowledge are leaving with them. Emami believes this trend could have long-term consequences for infrastructure reliability, project execution, and workforce development across the utility sector.

"We spend a lot of time talking about aging equipment, and that conversation is important," said Emami, Chief Executive Officer of Parkia, Inc. "But aging expertise is becoming just as critical. Equipment can be replaced. The judgment that comes from forty years of field experience is much harder to replace."

Industry studies support the concern. The Center for Energy Workforce Development has reported that large portions of the utility workforce are approaching retirement eligibility, while many utilities continue

to face shortages of skilled workers across engineering, operations, construction, and maintenance roles. At the same time, utilities are managing growing electricity demand, infrastructure modernization projects, and increasing reliability expectations.

According to Emami, infrastructure failures are often prevented not by technology alone, but by experienced professionals who recognize risks before they become problems.

"I have worked with supervisors who could walk onto a job site and identify a problem before a report was written or a warning light appeared," Emami said. "They had seen similar situations dozens of times over their careers. When those people retire, you do not just lose a position. You lose decades of pattern recognition."

Throughout his career spanning nuclear power, public utilities, business development, and high-voltage transmission construction, Emami has observed how much operational knowledge remains undocumented.

Many veteran utility professionals understand the history of specific facilities, recurring maintenance challenges, local environmental conditions, and construction risks that may never appear in project manuals or engineering drawings.

"There are people in this industry who can tell you why a particular design decision was made twenty years ago, what happened during a previous outage, or why a certain piece of equipment behaves differently than expected," Emami said. "That information often exists in conversations, experience, and memory rather than formal documents."

As utilities accelerate investments in grid modernization, underground transmission systems, and resiliency projects, the industry faces the challenge of transferring knowledge while continuing to execute increasingly complex work.

Emami believes mentorship should be viewed as a form of risk management rather than simply a professional development initiative.

"Organizations spend a great deal of time managing operational risk, financial risk, and safety risk," he said. "Knowledge loss should be viewed the same way. If expertise leaves faster than it is transferred, the organization becomes more vulnerable."

He encourages utilities, contractors, and engineering firms to create formal knowledge-transfer programs, expand mentorship opportunities, and provide younger professionals with greater exposure to field operations early in their careers.

According to the U.S. Bureau of Labor Statistics, demand for electrical engineers, construction managers, and utility-related occupations is expected to remain strong as infrastructure investment continues across the country. Emami believes that creating opportunities for younger professionals to learn directly from experienced leaders will be essential to maintaining industry performance.

"The next generation is capable and motivated," Emami said. "The challenge is making sure they have access to the experience, context, and practical lessons that took previous generations decades to acquire."

As the utility sector continues to modernize America's infrastructure, Emami argues that preserving

institutional knowledge should become a strategic priority alongside equipment upgrades and technology investments.

"The industry's future depends on more than steel, concrete, and transmission lines," he said. "It depends on whether we successfully transfer knowledge from one generation of leaders to the next."

About Dianoush “Dion” Emami

Dianoush “Dion” Emami is the Chief Executive Officer of Parkia, Inc., an engineering and construction company specializing in high-voltage transmission, distribution, and underground electrical infrastructure. With more than 40 years of experience in the utility energy sector, his career includes leadership roles at Bechtel Power Corporation, the Los Angeles Department of Water and Power, Henkels & McCoy, and Parkia. He is recognized for his expertise in utility infrastructure, grid modernization, safety leadership, workforce development, and large-scale transmission projects throughout the western United States.

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