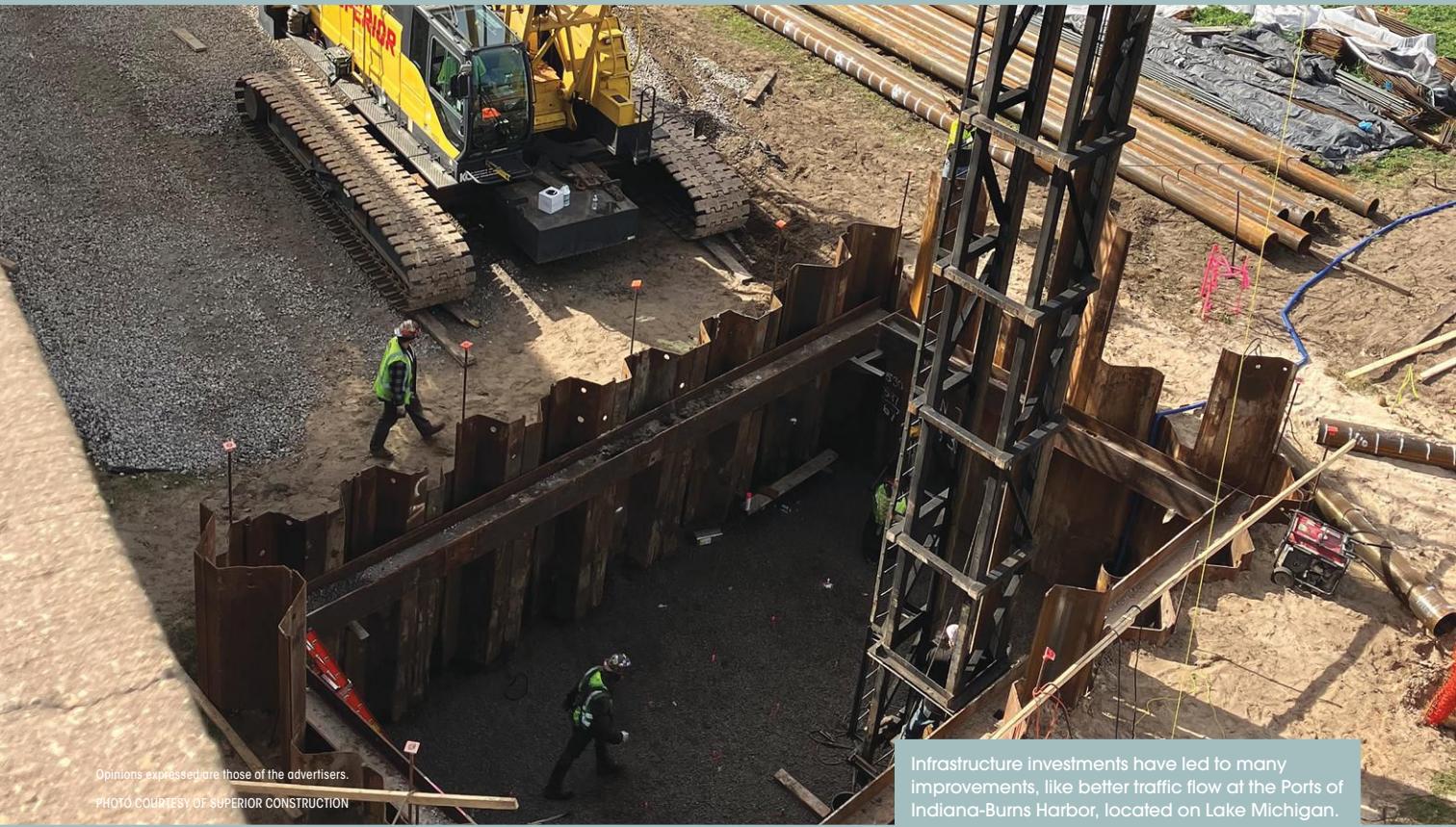


INFRASTRUCTURE CONSTRUCTION TODAY I



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Infrastructure investments have led to many improvements, like better traffic flow at the Ports of Indiana-Burns Harbor, located on Lake Michigan.

Maintaining Momentum

Industry leaders focus on the potential within the infrastructure market

By Kate Gawlik

The landscape of civil infrastructure blossomed in the past few years. In fact, the passage of the Infrastructure Investment and Jobs Act (IIJA) in 2021, coupled with private funds, set the market on a positive trajectory of growth. The act, which promised \$1.2 trillion for infrastructure projects, is set to expire in September, leaving some in the construction industry wondering what comes next.

For 2025, the U.S. was ranked 11th on an infrastructure quality assessment published by the World Economic Forum, following, from 1st place, Switzerland, Denmark, Sweden, Finland, Canada, Singapore, Hong Kong, Norway, Netherlands and Taiwan.

The U.S. invests 1.6% of its GDP in infrastructure, which is low compared to other countries.

As the House Transportation and Infrastructure Committee considers its next steps with no announcements about reauthorizing IIJA, construction industry leaders remain focused on needs and growth, balancing modernization and safety goals.



Kleinschmidt Chief Technical Officer Kelly Larimer shares her take on where the hydropower sector of infrastructure is headed.

IIJA funding expires this year on September 30. What comes next?

Over the past year, IIJA has provided targeted but catalytic funding for hydropower revitalization in the U.S. The law's new incentives and limited capital pools have helped many project owners move long-planned rehabilitation and modernization forward. We have seen stalled rehabilitation projects finally gain traction, aging turbines modernized and momentum with proposed pumped storage projects. Industry response to DOE's IIJA-funded hydro incentives has far exceeded available funding, underscoring both the program's impact and

We must reimagine hydropower not just as steel and concrete, but as a resilient, equitable and environmentally attuned pillar of America's clean energy future.

scoring both the program's impact and the need for more durable support.

From Kleinschmidt's perspective, IIJA's impact underscores the transformative power of predictable, sustained investment in clean energy infrastructure. The challenge now is to build on this momentum by advocating for stable, long-term programs that transcend single legislative cycles and enabling strategic planning across multi-year hydropower life cycles.

What trends are you watching?

While traditional new dam construction remains limited, the industry's focus has decisively shifted toward modernization—optimizing existing assets for performance, safety and grid flexibility. This includes turbine upgrades, digital instrumentation and enhanced structural assessments. Increasingly, owners see modernization not as optional maintenance but as essential decarbonization infrastructure.

Pumped storage hydropower (PSH) is emerging as a cornerstone of renewable energy reliability. With variable generation from wind and solar on the rise, PSH projects offer large-scale, long-duration storage that complements intermittent resources—and we are seeing a dramatic uptick in feasibility studies and federal interest.

What challenges are you attempting to overcome?

Despite robust funding and clear demand, the hydropower sector faces

several structural and operational challenges:

- **Workforce and Expertise Gaps.** With decades-old facilities and a retiring technical workforce, there is a growing need for specialized engineering, dam safety and environmental science talent. The next generation of practitioners must be cultivated through training programs, on-the-job mentorship and partnerships with academic institutions.
- **Regulatory Complexity.** Streamlining federal and state permitting remains a major hurdle. While agency alignment has improved, asynchronous timelines across resource agencies still challenge licensing and license implementation processes.

What infrastructure segment are you watching this year, and how does your company contribute to that market?

The segment we are most intensely focused on this year is hydropower asset rehabilitation and dam safety-driven upgrades. Across the United States, aging facilities are nearing the end of their original design life, and replacing or modernizing key components is essential not only for energy generation but for risk mitigation. Kleinschmidt's deep bench of engineers, dam safety specialists, and environmental scientists positions us uniquely to support owners through the full project spectrum: from risk-based assessments and condition evaluations to design, permitting and construction support.

Our work in fish passage design and aquatic ecosystem modeling continues to grow, bridging the gap between energy infrastructure and ecological stewardship. We see this not as a niche service but as fundamental to responsible hydropower modernization and broader infrastructure planning.

What unites these themes—funding, trends, challenges and market focus—is a shared imperative to reimagine hydropower not just as steel and concrete, but as a resilient, equitable and environmentally attuned pillar of America's clean energy future. ♦

Hydropower's Quiet Role in a Resilient Infrastructure Future



The Lake Conestee Dam Restoration Project LLC sought a comprehensive solution from Kleinschmidt to address the structural and environmental challenges of the Lake Conestee Dam in Greenville, S.C.

As the nation reinvests in aging infrastructure, hydropower often works behind the scenes—steady, reliable and deeply integrated into the systems communities depend on every day. Unlike new build solutions, much of hydropower's opportunity lies in modernization: extending the life of existing assets while improving safety, efficiency and environmental performance.

Today's hydropower engineering sits at the intersection of climate resilience and infrastructure stewardship. Engineers are tasked with adapting facilities designed decades ago to meet modern demands, more variable hydrology, evolving regulations and increased expectations for ecological responsibility. This work requires more than technical precision; it requires systems thinking, long-term planning and collaboration across disciplines.

Hydropower infrastructure is uniquely positioned to support grid stability while responding to climate-driven uncertainty. When approached thoughtfully, upgrades can strengthen dams and waterways, enhance fish passage, and improve operational flexibility, delivering benefits that extend well beyond power generation.

In an era focused on rebuilding smarter, hydropower reminds us that resilient infrastructure isn't always new. Sometimes, it's about unlocking the full potential of what already exists, with the future firmly in mind.

Learn more at kleinschmidtgroup.com. ♦