

Why energy's future can't be built in silos

By Len Vermillion

The energy industry has never lacked ambitious technologies, capital or ideas. What it does lack is the ability to solve its biggest problems within a single company, industry or regulatory silo.

That was one of the central messages of the Powering Progress Together panel at YNOW2026, Yokogawa's User Conference & Exhibition in New Orleans. As electricity demand accelerates—driven, in part, by data centers, electrification and new industrial loads—the panelists argued that the future of energy infrastructure will depend less on any individual technology than on the ability of organizations with competing interests to work together.

Lynn Lyon, Energy and Sustainability Market Lead for Yokogawa, moderated a discussion featuring Monika Simoes, CEO and Founder of Energy Dialogues; Fedor Mikheev, Energy Sector Leader at Texas A&M University; and Cooley May, CEO of C-MACC. Their perspectives

ranged from energy markets and infrastructure investment to academic research, policy and industry collaboration. But all three arrived at a similar conclusion: energy challenges have become too interconnected for anyone to solve alone.

"The general understanding is that it takes more groups to sit at the same table," Simoes said. "It's very hard to take things in a silo, and it takes a big group to come together, especially people with different perspectives."

That need is becoming increasingly apparent as the definition of the energy industry itself expands. Conversations that were once focused on upstream, midstream and downstream operations now include hyperscale data centers,

electricity providers, technology companies, industrial manufacturers, regulators and government agencies.

"The conversations have changed a lot," Simoes added. "We went from upstream to, now, it's all about data centers and electrification. Having those people in the room is important to come out with solutions."

Getting everyone in the room

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Mikheev, whose work spans industry, government and academia, said one of the most difficult parts of collaboration is simply bringing the right stakeholders

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together and helping them understand one another.

“The hardest part, I think, is to get everybody in the same room,” he said. “Then, the next step is how they listen to each other and understand each other, because the interests are different.”

Those differences cannot simply be ignored. Utilities operate under regulatory frameworks. Industrial companies must protect margins and maintain production. Technology providers need viable markets for innovation. Government agencies must balance economic development, reliability, affordability and public interests.

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The answer, according to the panel, is not to pretend those interests are identical. Instead, successful ecosystems begin by recognizing constraints and identifying areas where different interests overlap.

Simoes said participants must understand that they may not all be pursuing precisely the same outcome. “Everyone comes with their constraints. Everyone comes with their interests. We might not want to work toward the same goal, but how we get there and what that looks like might be a little different for everyone. That doesn’t mean we can’t work together on some solutions.”

Trust becomes essential once those differences are on the table. Mikheev said collaboration cannot move beyond presentations and transactional relationships without it. “We’re starting with a two-way communication,” he said. “That’s when we’re starting to get something better. Trust is important.”

Time is an energy resource

One area where collaboration can produce immediate value is speed.

May pointed out that the value of new energy infrastructure depends heavily on when it comes online. A megawatt delivered five years from now is not equivalent to a megawatt available today, particularly as data centers and other large loads seek reliable power immediately.

“When I look at the constraints surrounding a particular project, it’s those timelines,” May said. “A megawatt produced in five years is much less valuable than a megawatt produced today.”

Shortening project timelines means coordination across an ecosystem of infrastructure owners, regulators, developers, equipment providers and customers. Delays in one part of the system can affect the economics of the entire project.

“You’re running through capital at the same time,” May added. “Your return profile is shrinking. So, tightening those timelines will become incrementally more valuable across collaborative parties.”

Simoes said the clash between energy industry timelines and hyperscale technology timelines has made that challenge impossible to ignore.

“They want power now, and 24/7 and reliable,” she said of energy customers. “This whole tightening timelines, I think, is really important because now we see it more than ever.”

At the same time, building new infrastructure remains difficult. That reality

is pushing the industry away from what Simoes called “aspirational ideas” and toward pragmatism.

“We can all work toward a perfect solution one day,” she said, “but we shouldn’t let that stand in the way of doing what we can do right now.”

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—**Monika Simoes**, CEO and Founder,
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Beyond zero-sum thinking

The panel’s broader argument was that energy development cannot be treated as a zero-sum competition between fuels, industries or policy priorities.

May described the importance of taking a value-chain perspective rather than optimizing one company or asset in isolation. He said organizations can quickly make poor investment decisions when they focus only on their own silo and fail to account for constraints elsewhere in the system. “You can be humbled very quickly when you do not take a value-chain approach. You only look at your silo and you’re not looking at what’s going on around it.”

His example of the green hydrogen market illustrated the point. A technology may be technically viable and have customer demand, but the project can still struggle economically if a critical resource—in this case, power—is unavailable at the right price and location.

That same system-level thinking increasingly applies across the entire energy economy. Producers are looking

downstream toward customers and markets. Chemical companies are examining upstream energy investments. Electricity constraints are affecting industrial development. Data-center growth is reshaping generation decisions.

The panel also discussed investments capable of producing multiple benefits simultaneously. May pointed to efficiency improvements that can improve plant economics while reducing emissions, and infrastructure projects that can support power production, jobs and community development.

“I think the clearest example is when you can invest in something that solves multiple problems,” May said.

Mikheev similarly argued that energy infrastructure must balance reliability, sustainability and affordability rather than optimizing exclusively for one. “We have to make sure that we kind of see it all together: reliability, sustainability, affordability. If we go too much one way, then the other two things suffer.”

Public-private partnerships

The panelists were also clear that collaboration cannot depend solely on goodwill.

Large-scale infrastructure requires structures capable of bringing private investment, public policy, research institutions and local stakeholders together. Mikheev said one of the biggest gaps he sees in developing industrial clusters and regional infrastructure is governance. He noted, “First, as we worked through the project, we identified that the biggest gap is in governance.”

Public-private partnerships can provide a mechanism for coordinating those interests, but only when roles are clearly

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defined and the organizations involved have a shared framework for action.

Simoës said policy stability is particularly important because energy projects often have investment horizons measured in decades. “Energy projects are 20- or 30-year timelines,” she noted. “We just need to know what the policy framework is.”

Constant policy swings may create winners in the short term, but they can make it difficult for the broader system to build and invest. “The pendulum swings always benefits someone,” Simoës added. “But in the end, it keeps swinging, and we can’t accomplish anything.”

At the same time, she expressed optimism that energy issues are attracting broader participation and, in some areas, bipartisan support. More importantly, she said, engineers and scientists remain a powerful source of hope.

Technology as part of the ecosystem

For attendees, the discussion conducted a familiar lesson; technology alone does not create resilient infrastructure.

Mikheev emphasized the importance of better information and a stronger foundation for decision making, while May encouraged organizations to use technology to improve operations, predictability and investment outcomes. “You’re becoming more of a strategic operating market,” he said of the growing importance of technology and operational data.

Mikheev challenged engineers to better understand the flexibility of the systems they operate and to measure capabilities that may currently be invisible.

“Try to measure your flex,” he said. “You don’t need permission to get that number. Then, when you get that number, tell someone.”

For Simoës, however, the ultimate challenge is to expand collaboration beyond familiar industry boundaries.

“The silo issues go beyond your everyday work,” she said. “There are a lot of parallels in different industries that can serve us and how we move forward and how we innovate.”

That may be the most important takeaway from the discussion; the energy system is becoming more interconnected, not less. AI, automation, electrification, industrial production, infrastructure investment and public policy increasingly affect one another and should not—can not—exist in silos. ∞