

# AI and Energy: Insights from Gastech Milan

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As artificial intelligence (AI) reshapes global power demand, energy companies are turning to intelligent systems to drive efficiency, reduce emissions, and find new commercial opportunities.

At this year's Gastech conference in Milan, Italy, industry leaders commented on how AI is changing the energy sector in the US and globally, driving infrastructure innovation, financial outcomes, and sustainability goals.

## Reshaping energy use

Microsoft is on track to run all its US data centers on 100% renewable energy by the end of the year, a goal made more complex by the surge in AI workloads, CCO of World Wide Energy & Resources Uwa Airhiavbere said at the conference.

"AI is pushing us to rethink how we consume and manage energy," he said. Microsoft has signed several gigawatts' worth of power purchase agreements, including an 835MW deal with Constellation to help restart a nuclear plant in Pennsylvania.

"We're not just consuming energy, we're reshaping how it's used," Airhiavbere added. "If AI isn't driving real business impact -- reducing grid constraints, improving safety, enabling predictive maintenance -- then it's just noise."

To manage the energy demands of AI, Microsoft uses its own tools to schedule compute-intensive tasks during off-peak hours, increasing CPU efficiency to 90%, well above the industry average of 50%, he said. The company's energy harvesting systems have reclaimed enough power since 2019 to run 23 million electric vehicles.

"We've had to invest in our own silicon and more efficient models to keep up," Airhiavbere said, referencing the \$80 billion in capital expenditure the company says it will put toward US data center infrastructure.

French energy giant Engie is applying AI to improve grid forecasting and battery optimization, with lessons from Europe informing its US strategy, global head of energy management, Henri Domenach, said.

"Our internal models have reduced balancing costs by 10%, and our battery deployment in Belgium is a template for similar projects in the US," Domenach said.

Engie is also using satellite imagery and sensors to push gas suppliers to deliver cleaner fuel.

"This isn't about regulation—it's about shareholder and customer expectations," Domenach said. "We're engineering the right mix -- wind, solar, batteries, and clean gas -- to reach 100% carbon-free energy. AI is central to making that

affordable and scalable.”

## OPEC to ‘Tech-PEC’

Manoj Narender Madnani, managing director at MARA, described the shift as a move from “OPEC to Tech-PEC,” with technology firms increasingly shaping energy markets.

“It took a tech company to restart nuclear in the US - that’s a signal,” he said.

Madnani emphasized the importance of long-term planning, pointing to India’s energy-first strategy as a model.

“In the UK, billions in wind infrastructure are curtailed due to poor grid planning,” Madnani said. “If we have AI tools, we should be able to match generation with capacity.”

Madnani predicted that tech giants will begin acquiring energy companies within the next three to five years. “There’s a fine line between the tech sector and the energy sector. That line is about to disappear,” he said.

Parisa Bardouni, a senior vice president and chief technology officer at Akur Solutions, urged a pragmatic approach to AI deployment, though noting Akur Solutions projects a 30% cost reduction by 2027 in offshore maintenance through AI and digital integration.

AI use cases that deliver tangible value without excessive complexity or energy consumption should be prioritized, Bardouni said. Companies should optimize data pipelines and avoid redundant processing to minimize environmental impact.

“AI isn’t the answer to everything,” she said “We must weigh AI’s carbon footprint against its potential to accelerate decarbonization, that’s the real challenge.”

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