

AI Energy 2 Conference to Tackle Critical Cooling Challenges for Next-Generation AI Chips

PITTSBURGH, PA, UNITED STATES, September 30, 2025 /EINPresswire.com/ -- The AI Energy 2 Conference, hosted by Shale Directories and H2-CCS Network, will address the urgent [cooling](#) demands posed by the rapidly increasing energy density of AI [chips](#). Scheduled for October 16, 2025, in Pittsburgh, the conference will bring together industry leaders to discuss and showcase innovative solutions for managing the extreme heat generated by high-performance AI workloads.



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*Phil Fischer, Client Executive,
Data Center, Black & Veatch.*

The proliferation of AI applications is driving unprecedented power consumption and thermal loads in data centers. As rack densities climb past 20kW and head toward 200kW (with roadmap to exceed 600kW in less than 36months), traditional cooling methods are proving insufficient to meet the thermal requirements of advanced chips like the NVIDIA GB200. The conference will feature a dedicated panel discussion on the rising energy density of chips and the ensuing cooling challenges.

"The energy density of AI hardware is reaching a critical tipping point," said Phil Fischer, Client Executive, Data Center, Black & Veatch. "The cooling systems of the future must be capable of handling these loads reliably and efficiently. The AI Energy 2 Conference will provide a vital platform for stakeholders to collaborate on the next generation of solutions."

The cooling challenges panel led by Phil Fischer will include representatives from Munters and Black and Veatch.

Key topics and innovative approaches to be discussed include:

- Direct-to-chip liquid cooling: The superior heat transfer properties of liquid allow it to move heat away from individual processor chips more effectively than air. Attendees will learn about single-phase and two-phase direct-to-chip cooling, which uses cold plates to remove heat directly at the source.
- Meeting overall cooling demands by systems that mix the chip cooling with traditional building cooling technologies.

- Microchannel cooling systems: Engineered by companies like Mikros Technologies, these systems utilize micro-sized flow channels to deliver high heat flux capacity at low coolant flow rates.
- Two-phase immersion cooling: This technique involves submerging servers in a dielectric fluid that evaporates to remove heat. It offers superior efficiency but requires careful consideration during deployment.
- The role of traditional evaporative cooling, air cooling and direct-to-chip cooling systems and meeting stringent reliability requirements.
- Waste heat recovery: With cooling accounting for a significant portion of a data center's energy bill, new systems are being developed to capture and reuse waste heat for secondary cooling or connection to district cooling needs.

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