INTELLIGENCE UPDATE

Uptime Intelligence Research Agenda

Douglas Donnellan 1 Jan 2026

The Uptime Intelligence research agenda includes a list of published and planned research reports for 2026, and is focused on Uptime Intelligence primary coverage areas: 1) power generation, distribution, energy storage; 2) data center management software; 3) sustainability, energy efficiency; 4) silicon and systems; 5) resiliency: outages, topology, climate risks; 6) cooling and heat rejection; 7) staffing and skills; 8) security and human risk.

April 2026

How AI training choices affect infrastructure costs

Interactive AI training approach costing tool

US capacity growth stumbled in 2025: what happened?

Vendors gearing up for 800V DC adoption

Draft EED delegated regulation sidesteps critical issues

Investments back two-phase cooling as water cold plate successor

US states rethink tax breaks amid rising scrutiny and costs

Energy crisis elevates the importance of fuel management

Dry cooling energy performance can rival evaporative cooling

IT-OT telemetry failings are hindering real-time applications

May 2026

Annual outage analysis 2026

Where to deploy AI training: a guide to the economics

Interactive AI training venue costing tool

Flagship servers push peak performance and lift efficiency

Modular data centers look to solve the challenges of AI

US data center critics pivot from moratoria to regulations

As AI models improve, availability lags behind

Emerging tech: carbon capture at source

Advances in fine-tuning reduce total volume of AI training

Lower density brings server efficiency and cooling gains

NERC alert points to future of grid

The problem with energy per token

Interactive AI token energy and carbon tool

June 2026

Is demand response a viable accelerator for grid interconnects?

No single hosting model dominates AI training

BESS in data centers: use cases and technologies

Confusion and consensus in liquid cooling maintenance

Rethinking thermal storage as a capacity tool

Hourly-matched net-zero by 2030 was an unrealistic Holy Grail

Real-time telemetry requires modern, flexible cybersecurity

Vendors are unreasonably optimistic about AI in operations

A culture of token abundance is colliding with financial reality

Grid flexibility classification gives structure to demand response

Ireland: on-site power is forced through the grid

OPINION: Improving outage trends mask growing risks

July 2026

Uptime Institute Global Data Center Survey 2026

DCIM buyer's guide

Carrier heat reuse

GHG Protocol Draft Scope 2 Accounting Guidance Comments

Skills decay - based on discussions from an event in Westchester

AI training economics REDUX

Energy forecasts

Even more crypto miners are pivoting towards AI

Operating temperatures

Balancing core count vs. power efficiency

Omniverse and Schneide: how Omniverse fits in with other digital twins

Extreme temperature resilience

AI paper summary

August 2026

Demystifying data center projects: a guide to community relations

Generators v Turbines at scale, onsite power

Do sites with on-site generation need to store gas for resilience?

Securing cooperation of local communities

Google to use batteries to smooth wind/solar supply to new MN data center

Energy Management Systems - an important EED milestone

The power side car / DC distribution update

(Titles, dates and descriptions are subject to change. Further details and extra reports and updates will be added to further iterations of this sheet as needed and will be available closer to the date of publication.)

ABOUT THE AUTHOR

Douglas Donnellan

2 Jul 2026

Douglas is a Research Analyst at Uptime Institute covering sustainability in data centers. His background includes environmental research and communications, with a strong focus on education.

ddonnellan@uptimeinstitute.com

About Uptime Institute

Uptime Institute is the Global Digital Infrastructure Authority. With over 4,000 awards issued in over 122 countries around the globe, and over 1,100 currently active projects in 80+ countries, Uptime has helped tens of thousands of companies optimize critical IT assets while managing costs, resources, and efficiency. For over 30 years, the company has established industry-leading benchmarks for data center performance, resilience, sustainability, and efficiency, which provide customers assurance that their digital infrastructure can perform across a wide array of operating conditions at a level consistent with their individual business needs. Uptime's Tier Standard is the IT industry's most trusted and adopted global standard for the design, construction, and operation of data centers.

Offerings include the organization's Tier Standard and Certifications, Management & Operations reviews and assessments including SCIRA-FSI financial sector risk assessment, the Sustainability Assessment, and a broad range of additional risk management, performance, availability, and related offerings. Uptime Education training programs have been successfully completed by over 100,000 data center professionals, such as the much-valued ATD (Accredited Tier Designer) and AOS (Accredited Operations Specialist). The Uptime Education curriculum has been expanded by the acquisition of CNet Training Ltd. In 2023.

Uptime Institute is headquartered in New York, NY, with offices in London, Sao Paulo, Dubai, Riyadh, and Singapore, and full-time Uptime professionals based in over thirty-four countries around the world.

For more information, visit www.uptimeinstitute.com