Americase International Regulatory Expert Contributes to OCP Guidance on Data Center Energy Storage Safety

HazMat Safety Consulting's Mike Pagel contributes dangerous goods and regulatory expertise to OCP guidance for safe energy storage deployment in data centers

WAXAHACHIE, TX, UNITED STATES, September 8, 2026 /EINPresswire.com/ -- Americase International, a provider of mission-critical protection, testing and dangerous goods compliance solutions, today announced that Mike Pagel, Principal Consultant with its HazMat Safety Consulting subsidiary and a contributing author to the Open Compute Project (OCP) white paper, Requirements for Energy Storage Systems Used in Data Centers, helped inform the paper's guidance on dangerous goods transportation, regulatory compliance and lifecycle safety for energy storage systems used in data centers.

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>
> *Mike Pagel, Principal Consultant, HazMat Safety Consulting*

The January 2026 white paper provides guidance for the safe design, operation and maintenance of Energy Storage Systems (ESS) used in data centers as AI and high-performance computing increase power density, load variability and infrastructure complexity.

As AI and high-performance computing workloads drive greater demands on data center power infrastructure, energy storage is becoming increasingly important across configurations ranging from rack-level battery backup units (BBUs) to centralized uninterruptible power supply (UPS) systems and larger battery energy storage systems (BESS). The OCP white paper addresses safety and regulatory considerations including battery chemistry, testing, fire protection, transportation, emergency response and end-of-life management.

The guidance is particularly relevant for data center operators, hyperscalers, colocation providers, battery manufacturers and infrastructure teams because ESS safety extends beyond installation inside the data center. Batteries and battery-powered equipment may also be subject to transportation, testing, packaging, documentation, emergency response and end-of-life requirements across their lifecycle.



"Calling something a lithium battery tells you almost nothing about how it will actually behave," said Mike Pagel, Principal Consultant, HazMat Safety Consulting. "Form factor and chemistry produce materially different hazards, and the only way to know is to test it; you don't know what you don't know until you do. That's why this guidance treats testing, not just chemistry, as central. Standards such as The National Fire Protection Association (NFPA) 855 establish important safety requirements, while testing, such as under UL 9540A, helps evaluate how a system actually responds to thermal runaway, rather than assuming behavior based on battery type alone."

Addressing Data Center Energy Storage Risks

The OCP guidance examines energy storage technologies, including lithium-ion, nickel-zinc, lead-acid, sodium-ion and supercapacitor systems, each with different risk profiles based on chemistry, system architecture and application. It also addresses higher-voltage power architectures and the electrical and stored-energy hazards requiring specialized controls, training and qualified personnel.

Testing and validation are central to the recommendations. The paper references the National Fire Protection Association (NFPA) 855 requirements for ESS and ANSI/CAN/UL 9540A 5th Edition (2025) for evaluating thermal runaway and fire propagation characteristics. For lithium-ion systems, the guidance also addresses detection, mitigation and emergency response strategies associated with thermal runaway and fire risk.

Key Standards and Requirements Addressed

Among the standards, testing protocols and regulatory considerations discussed in the OCP guidance are:
- NFPA 855 — requirements addressing the installation and safety of stationary energy storage

systems.
- ANSI/CAN/UL 9540A, 5th Edition (2025) — testing used to evaluate thermal runaway and fire propagation characteristics of battery energy storage systems.
- UN Manual of Tests and Criteria, Part III, Sub-section 38.3 — testing requirements applicable to lithium battery design types prior to transportation.
- Dangerous goods transportation requirements — including applicable packaging, marking, labeling, documentation and training obligations for lithium batteries and battery-powered equipment.
- Lithium Battery Transportation Requirements for Data Centers

The guidance highlights transportation requirements for lithium-ion batteries and battery-powered equipment, including data center battery backup units that may fall under dangerous goods regulations. Applicable requirements can include testing, packaging, marking, labeling, documentation and training, as well as successful completion of UN Manual of Tests and Criteria, Part III, Sub-section 38.3 testing for lithium battery design types.

These requirements can apply at multiple points in the data center equipment lifecycle, including initial deployment, replacement, return, repair, redeployment and end-of-life shipment.

HazMat Safety Consulting (HSC), an Americase International company, advises organizations on regulatory requirements governing the transportation, storage and handling of lithium batteries and other dangerous goods, while Americase and Fulcrum Testing provide complementary packaging, containment and testing capabilities across the battery lifecycle.

Managing Risk Across the ESS Lifecycle

The OCP paper takes a lifecycle approach to ESS safety, addressing considerations from system selection and transportation through installation, operation, maintenance, emergency response and decommissioning. It also addresses Hazard Mitigation Analysis as a tool for evaluating risks associated with thermal runaway, mechanical failure and supporting systems.

"For data center operators, energy storage safety cannot be treated as a single event that begins when a battery enters the facility and ends once it is installed," said Robby Kinsala, CEO of Americase International. "The risks and regulatory responsibilities can extend from transportation and deployment through operation, maintenance, replacement and end-of-life. The OCP white paper provides an important framework for bringing those considerations together as data centers scale energy storage to support next-generation computing."

OCP's Energy Storage Systems workstream brings together industry stakeholders to develop common requirements and guidance for safe, reliable ESS adoption across data center environments. The Requirements for Energy Storage Systems Used in Data Centers white paper was published in January 2026 and is available through the Open Compute Project.

About Americase International

Americase International is a fully integrated enterprise that shapes and delivers protection, containment, and mitigation solutions across the lifecycle of high-value and dangerous goods — through regulatory enhancement and education; expert consultation; risk reduction; customized testing and validation; specialized training; and superior protective packaging. Combining HazMat Safety Consulting, Americase, and Fulcrum Testing, the company serves leaders across aerospace, defense, energy, medical, technology, and other highly regulated industries. With 200+ years of combined regulatory experience and nearly 50 years in engineering, testing, and manufacturing innovation, Americase International delivers proven solutions where failure is not an option. For more information, visit AmericaseInternational.com.

Frequently Asked Questions

Q: What does the OCP white paper on energy storage systems cover?
A: The Open Compute Project (OCP) white paper, Requirements for Energy Storage Systems Used in Data Centers, provides guidance for the safe design, operation and maintenance of energy storage systems (ESS) in data centers, addressing battery chemistry, testing, fire protection, transportation, emergency response and end-of-life management.

Q: Who is Mike Pagel?
A: Mike Pagel is Principal Consultant with HazMat Safety Consulting, a subsidiary of Americase International, and a contributing author to the OCP white paper Requirements for Energy Storage Systems Used in Data Centers. He contributed dangerous goods and regulatory expertise related to ESS transportation, compliance and lifecycle safety.

Q: What expertise did Mike Pagel contribute to the OCP energy storage white paper?
A: Pagel contributed expertise in dangerous goods transportation and regulatory compliance, helping connect data center energy storage safety with requirements that can apply to batteries and battery-powered equipment throughout transportation and other stages of the ESS lifecycle.

Q: What standards does the OCP guidance reference?
A: The guidance references NFPA 855 requirements for energy storage systems and ANSI/CAN/UL 9540A 5th Edition (2025) for evaluating thermal runaway and fire propagation characteristics, as well as UN Manual of Tests and Criteria, Part III, Sub-section 38.3 testing for lithium battery design types.

Q: Why are energy storage systems important to AI data centers?
A: AI and high-performance computing are increasing data center power density and infrastructure demands. Energy storage systems, including rack-level battery backup units, centralized UPS systems and larger battery energy storage systems, can support power continuity and resilience, making safe deployment and lifecycle management increasingly

important.

Q: How does the OCP guidance address lithium-ion battery thermal runaway?
A: The OCP guidance addresses thermal runaway through testing, detection, mitigation, fire protection and emergency response considerations. It references ANSI/CAN/UL 9540A 5th Edition (2025) for evaluating thermal runaway and fire propagation characteristics of battery energy storage systems.

Q: What is Americase International's role in data center energy storage safety?
A: Americase International, through HazMat Safety Consulting, Americase and Fulcrum Testing, provides regulatory consulting, dangerous goods compliance, protective packaging and containment, and testing capabilities supporting batteries and energy storage systems across their lifecycle.

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