CPSE CENTER FOR INNOVATION

Strategic Scan #5

Data Center Response and Preparedness

In partnership with:

AFESA
ASSOCIATION OF FIRE AND EMERGENCY SERVICES ANALYSTS

MARIST UNIVERSITY

Overview

Data centers are an increasingly important component of the digital economy, relying on concentrated networks of computer servers, data storage devices, and supporting infrastructure to store, manage, process, and transmit large volumes of information. These facilities can also create significant challenges for the communities and fire departments that serve them, including complex electrical systems, battery energy storage hazards, specialized suppression systems, intensive utility demands, and large-scale development impacts. Rapid growth in data center construction has therefore emerged as a focus for fire service leaders, elected officials, regulators, developers, and community members seeking to understand whether current preparedness, response capabilities, codes, infrastructure, and long-term planning are keeping pace.

This Strategic Scan will detail fire chiefs' perspectives regarding preparedness, response capabilities, infrastructure impacts, regulatory considerations, and strategic planning associated with modern data center facilities. This report is not intended to be representative of the full fire and emergency service, but to provide a snapshot of current perspectives from a broad range of leaders who are navigating both the challenges and opportunities associated with the growth of data centers in their jurisdictions. Data were gathered in July and August of 2026 from fire chiefs representing agencies accredited by the Center for Public Safety Excellence® (CPSE®) Commission on Fire Accreditation International® (CFAI®) and those holding the Chief Fire Officer® (CFO) credential from the CPSE Commission on Professional Credentialing® (CPC®). For the purposes of this survey, military agencies and those outside of the United States were excluded.

Results indicate that nearly a quarter of respondents (23%) already have an operational data center and 20% of respondents have data centers that are proposed on under review in their service area. Approximately two thirds (68%) of respondents agree that data center development will require significant changes to fire department planning and preparedness. Facility size and campus scale, complex building layouts, and diffuculty de-energizing equipment were identified as the aspects of data center response that create the most operational challenges.

Additional Data

The data shown here only represents seven of the questions on the survey. To view the rest of the data, visit our dashboard here. The dashboard provides survey background and aggregated responses from each question, organized into six topics and accessible through sidebar navigation or search. Interactive charts and tables allow you to filter by respondent group, switch between counts and percentages, and adjust how results are displayed, with response totals and interpretation notes provided for each. You can also read more about our aggregate reporting, how many respondents there were for each individual question, how we handled questions with more than one answer, the rating scales used, and how written answers were handled.

Table of Contents

Overview and Additional Data	2
Presence of Data Centers	4
Data Center Moratoriums	4
Operator Communications	5
Chiefs' Outlook on Data Center Challenges	5
Emerging Hazards	5
Current Preparedness	6
Future Preparedness	6
Actionable Takeaways	7
Conclusion	8

Sample Demographics

Survey Respondents

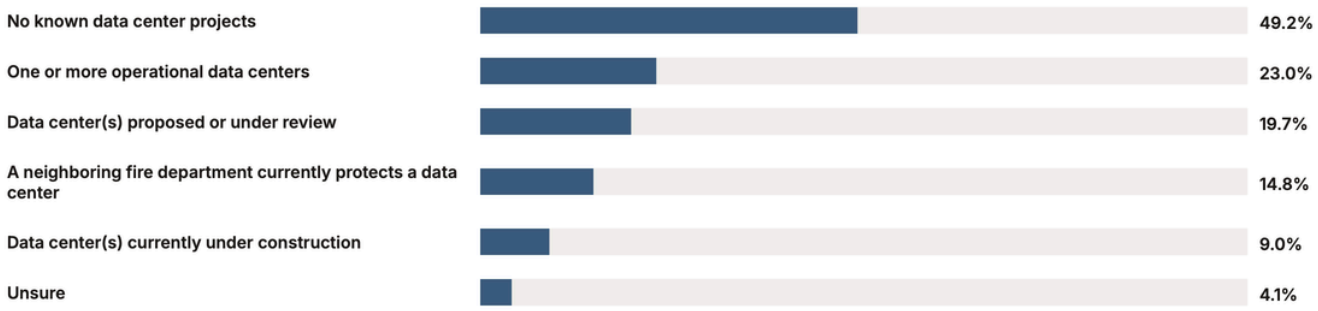
Total distributed: 543
Responses: 122
Response Rate: 22.5%
Total Designated CFOs: 35*
From Accredited Department: 27*
*Respondents who chose to include name

Service Area Characteristics

Population: 1,504 – 2.5 million
Median: 50,000
Square Miles: 3 – 7,500
Median: 42
Density (pop. / sq. mi.): 34.4 – 20,000
Median: 1,667

Data Center Presence

Fire chiefs responding to this survey were asked which of the following best describes the presence of data centers within their service area. Respondents could select more than one answer. Almost half (**49.2%**) of respondents have no known data center projects in their service area. Almost a quarter (**23%**) have one or more operational data centers, 19.7% have data centers that are proposed or under review, and 9.0% have a data center under construction. Whether they have a data center in their service area or not, 14.8% have one that is protected by a neighboring fire department.



Data Center Moratoriums

Fire chiefs responding to this survey were asked if their authority having jurisdiction (AHJ) imposed a moratorium on data center development, of which 19.1% said yes. Of those that had a moritoriam, the median legnth was 9 months.



Operator Communications

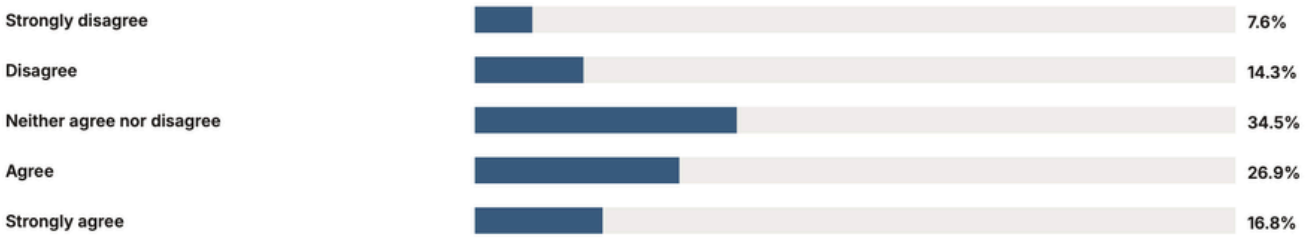
Fire chiefs were asked about whether data center operators have communicated with their agency. Results were split in half. Of those that responded yes, **29.2%** said the data center operator promised reinvestment in fire or emergency services as part of planning or approval processes

Operator Communication:

49% Yes | 51% No

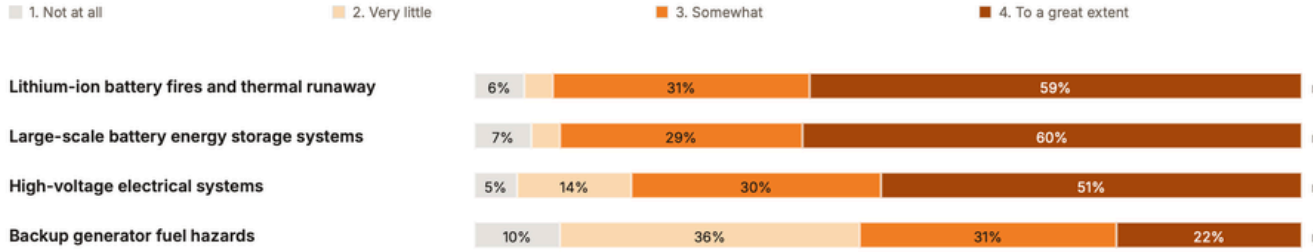
Outlook on Challenges

Fire chiefs were also asked about their level of agreement with the following: Data centers present significant fire and emergency service challenges for my agency. Nearly half of respondents (**44%**) provided the “agree” or "strongly agree” response.



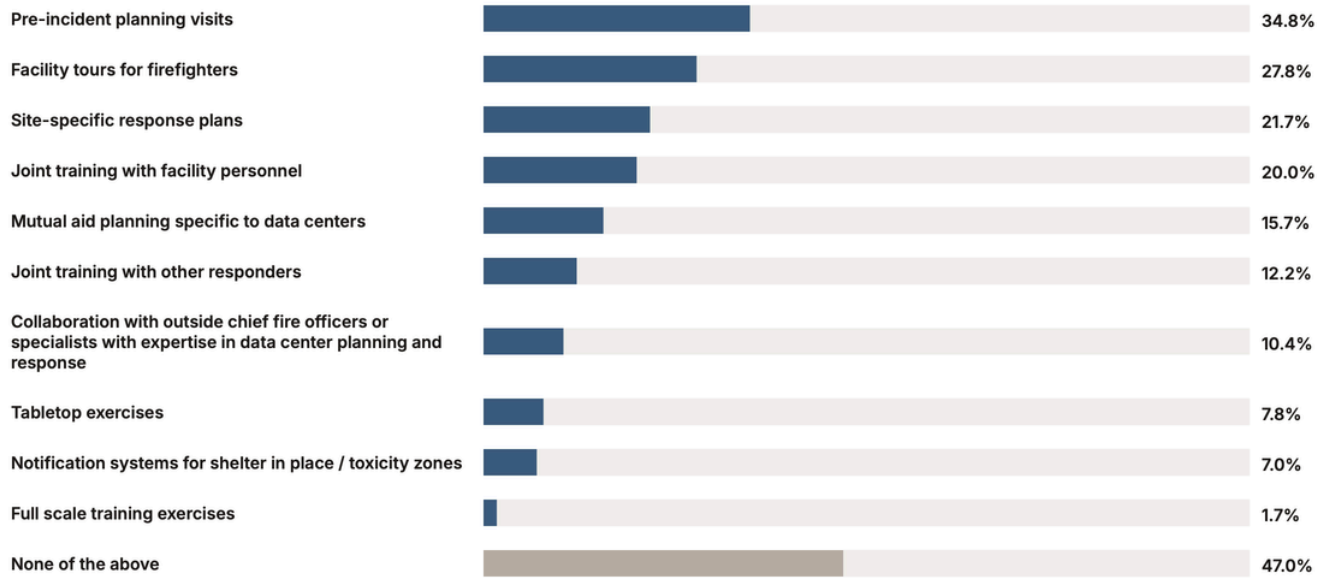
Emerging Hazards

Respondents were asked about the extent to which a number of data center considerations represent concerns for their agency. Most fire chiefs felt that lithium-ion battery fires and thermal runaway (**90.5%**) and large-scale battery energy storage systems (**89.6%**) from data centers present concerns for their department.



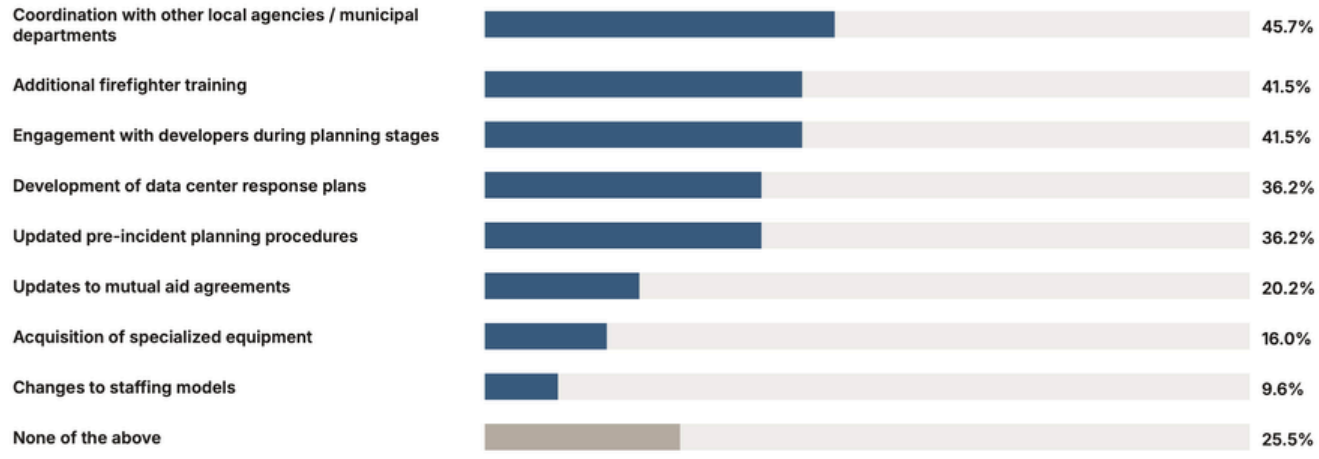
Current Preparedness

Respondents were asked about current preparedness strategies related to data centers. The most common preparedness strategies for data centers were pre-incident planning visits (**34.8%**), facility tours for firefighters (**27.8%**), site-specific response plans (**21.7%**), and joint training with facility personnel (**20%**).



Future Preparedness

Respondents were asked about planned departments actions within the next 24 months given potential data center concerns or challenges. Following coordination with local agencies (**45.7%**), the most common planned action in the next 24 months included additional firefighter training (**41.5%**) and engagement with developers during planning stages (**41.5%**). A quarter of fire chiefs (25.5%) selected 'none of the above.'



Actionable Takeaways

- **Conduct a data center–specific risk assessment within your jurisdiction.** Department leaders should identify existing and planned data center facilities in their service area and evaluate the unique hazards they present including high-density electrical systems, lithium-ion battery energy storage, chemical suppression agents, and limited access points. Leaders should integrate these findings into their all-hazard community risk assessment and ensure resource allocation reflects the scale and complexity of data center operations.
- **Engage proactively with data center developers and operators before incidents occur.** Department leaders should establish pre-incident planning relationships with data center owners, facility managers, and design engineers. Early engagement during the permitting and construction phases allows departments to influence site access, fire protection system design, and emergency response protocols thereby reducing risk and improving outcomes before a facility goes online.
- **Invest in specialized training and equipment to address data center hazards.** Department leaders should recognize that data centers present hazards that differ significantly from conventional commercial occupancies. Leaders should prioritize targeted training programs, joint exercises with facility personnel, and acquisition of equipment suited to these environments to ensure responder readiness and safety.
- **Pursue regulatory clarity and advocate for updated codes and standards.** Given the rapid pace of data center construction and evolving technology, department leaders should work with local building officials, code enforcement agencies, and state-level regulatory bodies to ensure fire and life safety codes adequately address modern data center configurations. Leaders should participate in code development processes and advocate for standards that reflect current construction practices, energy storage systems, and occupancy characteristics.
- **Develop cross-functional partnerships to address infrastructure and community impacts.** Department leaders should collaborate with planning and zoning agencies, public utilities, emergency management offices, and neighboring jurisdictions to understand and plan for the broader community impacts of data center growth including strain on water supply, electrical grid capacity, transportation infrastructure, and mutual aid resources. A coordinated approach ensures that agency strategic planning accounts for cumulative demands rather than each facility in isolation.

Conclusion

This strategic scan on data center response and preparedness highlights the extent to which data center growth, hazard complexity, and evolving technology have emerged as significant and multifaceted challenges for fire department leadership. Nearly half of respondents identified data centers as presenting meaningful fire and emergency service challenges, driven primarily by complex electrical systems, lithium-ion battery energy storage hazards, and the scale and density of modern data center facilities. These findings underscore the degree to which data center development carries direct implications for operational readiness, community risk reduction, and long-term strategic planning.

In response to these challenges, fire chiefs report pursuing a range of preparedness strategies. Some agencies are conducting pre-incident planning visits, facility tours, and joint training exercises with data center personnel. At the same time, interest in specialized training, updated codes and standards, and cross-functional partnerships with planning agencies, utilities, and neighboring jurisdictions suggests a growing recognition that data center preparedness requires coordinated, multi-disciplinary approaches.

As with prior strategic scans, these results are not intended to be representative of the fire and emergency service as a whole, but rather provide a focused snapshot of perspectives from accredited agencies and credentialed chief officers. Nonetheless, the findings indicate that CFAI® agencies and CPC® designees are actively engaging with emerging challenges associated with data center response and preparedness.

Data center growth represents one of the most rapidly evolving land use and hazard trends affecting the fire and emergency service today. This strategic scan creates an opportunity for continued dialogue about preparedness standards, regulatory frameworks, operator engagement, and the long-term resource and infrastructure implications of data center development. As agencies navigate an increasingly complex and fast-moving landscape, proactive planning, early engagement, specialized training, and collaborative partnerships will remain essential to maintaining operational readiness and community trust.

Find supporting performance indicators in
Criterion 5D: All Hazards Preparedness
of the CFAI 11th edition FESSAM

Thank you to the National Fire Protection Association® (NFPA) for their support of this project.

Linked below are related resources from the NFPA:

The Data Center Boom: Implications for Fire and Electrical Safety

As Data Centers Expand, Existing NFPA Codes and Standards Help Support Safe Growth

Linked below is a related resource from the International Code Council® (ICC):

ICC Guideline 12 Data Centers (G12)

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