Turning Data Center Development Into Technology Opportunity

Data center growth is not being limited by a lack of technology. Rather, it is often infrastructure decisions that determine whether projects can be permitted, built, operated, and scaled.

ICAC's three-part webinar series examines how permitting, emissions control, and monitoring are shaping today's data center landscape and what stakeholders need to understand as projects move from planning to operation.

As development accelerates across the United States, air permitting has become a critical gating factor. It is influencing site selection, power generation strategies, project timelines, and community engagement—**often adding 18–24 months or more to project schedules**. Permitting is no longer a back-end compliance step; it is now central to project planning and execution.

But permitting is only the starting point. As data centers increasingly rely on on-site generation emissions control technologies are becoming core to system design. Operators must integrate solutions that reduce pollutants such as NOx, CO, and VOCs while maintaining reliability, efficiency, and compliance with tightening regulatory thresholds. **What was once treated as an add-on is now embedded in how facilities are designed and scaled**.

Monitoring is also evolving. What used to be a reporting function is now becoming real-time operational infrastructure. Technologies such as continuous emissions monitoring systems (CEMS), predictive emissions monitoring systems (PEMS), and advanced multi-gas monitoring platforms are providing greater visibility into performance, supporting risk management, and strengthening accountability with regulators and communities.

At the same time, expectations are rising. State and local requirements are becoming more detailed, with greater emphasis on transparency, emissions performance, and community-level impacts.

The takeaway is clear:

- **Permitting decides the threshold and "sets the base."**
- **Control technologies determine what is achievable.**
- **Monitoring proves performance.**

Featuring ICAC member companies Bison Engineering, Burns & McDonnell, Johnson Matthey, Mitsubishi Power Americas, Thermo Fisher Scientific, and DURAG Group.

The facilities that get this right will not just meet requirements. **They will set the standard for responsible, scalable data center development.**

Missed the webinar series? Access ICAC's three-part discussion on the permitting challenges, emissions control strategies, and monitoring technologies shaping today's data center landscape on the ICAC website.

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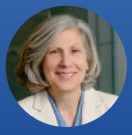

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