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DATA CENTER DESIGN, CONSTRUCTION, AND SITE SELECTION

April 20-21, 2020

**Atlanta Marriott Suites Midtown
Atlanta, GA**

“

“This data center design and construction class covered many topics in a short period of time, that were insightful and compelling. The speaker was an expert in the subject matter.”

Protection and Integration Project
Engineer Manager, RAI



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by IACET to offer 1.5
CEUs for this event

OVERVIEW

It is said that the growth of the data center industry is currently larger than the 20th century industrial revolution and it is about to get bigger in ways we never thought of.

As we enter a new decade, emerging trends in technology and the demand for sustainability is shaping the future of the data center industry. The infrastructure to support the expected explosive growth IoT devices and cloud services driven further by the rollout of 5G networks are forcing data centers to get ahead of the growth curve. Moreover, the focus on the data center industry as an excessive consumer of global power is creating enhanced markets for renewable energies as data centers adapt to more sustainable operations.

This is an interactive course on evolving: Data center siting criteria; the shifting designs to meet changing technological, operational and market needs; and the impact on a shrinking construction budget and timeline. All attendees are encouraged to fully participate in the discussion with questions answered throughout the two days.

LEARNING OUTCOMES

SITE SELECTION:

- Assess how to determine the “best” data center sites
- Review location and incentives
- Identify speed to market - Growth thru acquisition

DESIGN:

- Review of the present-day approaches to infrastructure design as a reference point
- Identify the evolving trends with discussions on the opportunities/challenges
- Power:
 - o The rise in power density and distributed power concepts
 - o Clean energy – The new frontier for data centers and utilities
 - o The changing attitudes on back-up power
- Cooling:
 - o Is “Free Cooling” free / Cooling without compressors
 - o The rise and return in direct water-cooled processing
- Discuss connectivity today and in the future
- Review the forgotten systems
 - o Fire – Components: How does it work? Does anyone know?
 - o Water – How much does one need?
 - o Fuel – Diesel, natural gas, biogas - What are the challenges?
 - o Automation
 - Scan rates: Is it really “Realtime”?
 - Information overload

THE CONSTRUCTION CYCLE:

- Discover strategic building
- What are the new timelines
- Discuss the drive towards site assembly vs stick build
- Building at \$3 – \$8M per megawatt
- Identify opportunities beyond BIM

WHO SHOULD ATTEND

- Data Center Operators and Owners
- Enterprise Data Center Customers / End Users
- State and Regional Economic Development Professionals
- Utilities Professionals in:
 - o Economic Development
 - o Marketing
 - o Business Development
 - o IT
 - o Engineering
 - o Operations / Data Center Operations
 - o Reliability & Resiliency

COURSE INSTRUCTOR



Dennis Cronin
CEO, Resilient Solutions, LLC

For over 40 years Dr. Cronin has been a leader in the operational aspects of technology in both Enterprise and Colocation operations. The greater part of his career has been with large fortune 500 financial and retail organizations.

Dr. Cronin is the CEO of Resilient Solutions, LLC—a Mission Critical Consultancy firm founded in 2003 that is focused on data center Design/Construction, Operations, Marketing, Forensics and Research. Previously, Dr. Cronin has held the positions as Technical Managing Director for the Research Foundation at Binghamton University and COO of Steel ORCA. He has 20 years of experience in designing and constructing back office operations for multiple Wall Street firms.

Currently, his efforts are spotlighting Data Center Education, Staff Certifications and industry research.



“Very good presenter. This was excellent to get a basic set of knowledge.”

President, SB Ballard
Construction Company



“This course gave me a good basis to move forward with confidence in the future when working on data centers.”

Project Manager, S.B. Ballard Construction Co.



“Very knowledgeable and professional. Great teaching style.”

Transportation Planner, Metro

AGENDA

MONDAY, APRIL 20, 2020

7:30 – 8:00 am

Registration and Continental Breakfast

8:00 – 10:00 am

Intro to Data Centers & Site Selection

- Markets, Solutions & Confusion
- Developing the Criteria
- Raw Land and Renovation
- Site Development – Does It Fit?
- Labor Availability
- Incentives
- Networks – Can't Work Without Them

10:00 – 10:20 am

Morning Break

10:20 am – 12:30 pm

Design - Architecture

- Discuss Uptime Understanding – Tier Management and Reliability
- Data Center Technology Layouts
- Building Adjacencies
- Densities & Efficiency
- DCIM/Automation – Adding Complexity
- Fire Systems & Changing Codes
- Fuel, Water & Waste Systems
- Security Systems

12:30 – 1:30 pm

Group Luncheon

1:30 pm – 3:15 pm

Design – Power

- Transmission vs Distribution Service
- Right Sizing the Service
- Power Topologies
- AC vs DC
- Green Energy – Fuel Cell, Solar, Wind, Hydro, Geothermal

3:15 – 3:30 pm

Afternoon Break

3:30 – 5:00 pm

Design – Power (Continued)

- Site Power - Buried vs Overhead
- UPS Varieties > Virtual Power
- Rethinking Batteries
- Rethinking Generators
- Onsite Fuel



“Data Center for Dummies. This was excellent to get a basic set of knowledge.”

President, S. B. Ballard Construction Co.

AGENDA

TUESDAY, APRIL 21, 2020

7:30 – 8:00 am

Continental Breakfast

8:00 – 10:00 am

Design – Mechanical

- Conventional
- Modified Conventional
- DX
- Direct Evaporative
- Indirect Evaporative
- Atomized Cooling

10:00 – 10:20 am

Morning Break

10:20 am – 12:30 pm

Design – Mechanical

- 100% Outside Air
- Chicken Coop & Dome Designs
- Water Closer to the Load
- Direct Water Cooled
- Micro Data Centers
- Edge Computing

12:30 – 1:30 pm

Group Luncheon

1:30 – 3:15 pm

Construction

- Stick vs Modular, vs Renovation
- The Drive to Pre-Fab
- Schedule & Long Leads
- Bidding vs Negotiating
- Owner Purchased Components
- The Budget
- Attracting Prime Subs and Specialties
- Site Logistics & Temp Power

3:15 – 3:30 pm

Afternoon Break

3:30 – 5:00 pm

Construction/Commissioning

- Client Technology Installs
- BIM, Shop Drawings – The Missed Opportunity
- Digitizing Manuals & As-Builts
- When Does Commissioning Start?
- Team Size - Defining Responsibilities for Support
- Defining the Pass/Fail Criteria
- Training



“Really informal conference that offered a ton of information regarding the current state of data centers and the direction that they are going towards in the future.”

Systems Engineer Tech II,
Walmart East Data Center

REQUIREMENTS FOR SUCCESSFUL COMPLETION

Participants must sign in/out each day and be in attendance for the entirety of the course to be eligible for continuing education credit.

INSTRUCTIONAL METHODS

PowerPoint presentations, group discussions, and active participation.

EVENT LOCATION

A room block has been reserved at the **Atlanta Marriott Suites Midtown**, 35 14th Street NE Atlanta, GA 30309, for the nights of April 19-20, 2020. Room rates are US \$198 plus applicable tax. Call **1-404-876-8888** for reservations and mention the EUCI event to get the group rate. The cutoff date to receive the group rate is March 30, 2020 but as there are a limited number of rooms available at this rate, the room block may close sooner. ***Please make your reservations early.***

REGISTER 3, SEND THE 4TH FREE

Any organization wishing to send multiple attendees to this conference may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.

IACET CREDITS



EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

EUCI is authorized by IACET to offer 1.5 CEUs for this course.

To Register Click Here, or

Mail Directly To:

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PO Box 2303
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Fax 253 663 7224
register@pmaconference.com

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ENERGIZE WEEKLY

Energize Weekly is EUCI's free weekly newsletter, delivered to your inbox every Wednesday. We provide you with the latest industry news as well as in-depth analysis from our own team of experts. Subscribers also receive free downloadable presentations from our past events.

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PLEASE SELECT

DATA CENTER DESIGN, CONSTRUCTION, AND SITE SELECTION COURSE

APRIL 20-21, 2020: US \$1495

EARLY BIRD on or before April 10, 2020: US \$1295

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

Print Name

Job Title

Company

What name do you prefer on your name badge?

Address

City

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Zip/Postal Code

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List any dietary or accessibility needs here

CREDIT CARD INFORMATION

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Account Number

Billing City

Billing State

Exp. Date

Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

Billing Zip Code/Postal Code

OR Enclosed is a check for \$ _____ to cover _____ registrations.

Substitutions & Cancellations

Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before March 27, 2020 in order to be refunded and will be subject to a US \$195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, EUCI's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices. EUCI reserves the right to alter this program without prior notice.