

ASHRAE Hong Kong Chapter BEAM Society Limited Joint Technical Seminar

Green Data Center –
Trends and technologies for design, installation,
monitoring and assessment for data center performance.
The success stories and some common pitfalls.



BEC Auditorium, G/F.
Jockey Club Environmental Building
77 Tat Chee Avenue, Kowloon Tong



08 Jan 2024
2:00 Pm - 5:00 Pm



Medium of instruction
English

THE SPEAKERS



Mr. Jim Vallort

Topic:
Achieving a Green Data Center:
More than a Good Design Is Needed



Mr. Chris Wong

Topic:
Data Center Immersion Cooling System



Ir Emily Wong

Topic:
Assessment Guidelines and Best Practices for
Green, Sustainable, Reliable, and Energy-Efficient
BEAM Plus Data Centers

Fee

- **ASHRAE and BEAM Society Limited Associate & Ordinary Member, BEAM Pro and BEAM Affiliate**
\$250
- **Supporting organization**
\$300
- **Standard**
\$350

Remark: 3-hours CPD certificate will be provided

Registration

Number of participants is limited and prior registration is required.

For registration :
www.beamsociety.org.hk/-/media/5579F4C4D4CC4ED286BEB429AD882A53.ashx

The deadline of application is on 3 Jan 2024. Successful will be notified by e-mail on or before 5 Jan 2024.
If the applicants have not received the confirmation e-mail on or before 5 Jan 2024, their applications will be regarded as not successful.

Enquiry

Please call Vincent Cheung, BSL at 36105719 or email to beampro.training@beamsociety.org.hk

Supporting Organization

Achieving a Green Data Center: More than a Good Design Is Needed

The concept of a Green Data Center is difficult to perceive with a building full of computers consuming electricity. So the goal for a green data center is to minimize the energy consumed by the facility that does not go into computing power. To achieve this reduction the site selection, facility program, design, installation and operations all play an equal role. Jim will discuss some current trends and design strategies for high performance in various climates and he will also present some keys to maintaining the edge of a high performance site such as Cx at turnover, seasonal testing, operations plans for changing IT loads, EBCx as operations change, Cx of added equipment during the life of the data center and most importantly - annual monitoring and operational adjustments. These concepts, success stories and some common pitfalls will be presented.

THE SPEAKERS

Mr. Jim Vallort

ASHRAE Distinguished Lecturer



Jim Vallort has spent his career focusing on energy: ranging from measuring energy usage, optimizing the systems, integrating automation to control energy and the impact of commissioning on energy consumption. Jim brings a unique perspective having been on the engineer of record, 3rd party commissioning and contracting sides of project delivery.

Jim is the Commissioning Program Manager for Mortenson, a Top 20 US Contractor. Jim also served as an ASHRAE Society Vice President for the 2015-2016 Board of Directors. He currently serves as a member of Technical Committee (TC) 7.9, Building Commissioning and Guideline Project Committee 1.6, Commissioning of Data Centers. Jim previously served on the Board as a director-at-large in 2005-08 and as Region VI director and Regional Chair in 2001-04.

Jim has over 20 publications and numerous presentations under his belt on topics ranging from Energy Efficiency, Automation and Commissioning to Underfloor Air Distribution. He has been an invited speaker at multiple fortune 500 companies educating their staff on building automation, energy efficiency, existing building commissioning and new construction commissioning. He brings a unique perspective on the constructability and real world aspects of our industry having been a union pipefitter, spent years in the field commissioning projects, combined with the experience as a mechanical designer, building automation designer and energy modeler.

Supporting Organization

Data Center Immersion Cooling System

Immersion cooling is a highly efficient cooling solution that involves submerging servers in a non-conductive fluid. This fluid absorbs the heat generated by the servers, allowing for highly efficient cooling. It does not only enables data center operators to meet the increasingly demanding heat dissipation and power requirements for IT infrastructure today, it can significantly reduce energy consumption by 45% compared with traditional air-cooling systems and improves the PUE to 1.09 or even lower.

Chris will share with us why Immersion Cooling is so important for a data center, how does it work and the challenges for Immersion Cooling adoption. He will also present the details of the first of this cooling system for data center in Hong Kong.

THE SPEAKERS

Mr. Chris Wong

Associate Director - Facility Management of Newtech Technology



Mr. Chris Wong is the Associate Director – Facility Management of Newtech Technology. With over 20 years of experience in engineering industry, Chris has extensive expertise in managing critical systems in data centers, server rooms, and commercial offices. With a specialization in the field of cooling systems and chiller plant operation management, Mr. Wong consistently demonstrated his proficiency in overseeing and optimizing the efficiency of mechanical facilities in mission critical environments.

Chris's experience, dedication, and exceptional leadership abilities have contributed to the success of numerous remarkable projects. He leads and manages the Facility Team to provide services related to all mechanical & electrical systems for critical environments, while optimizing cooling and chiller systems, implementing energy-efficient practices, and staying abreast of industry advancements. His contribution also extends to installation, testing and commissioning of projects.

In addition, with his knowledge in Mechanical Engineering and Intelligent Building Technology, Mr. Wong also leads the team to develop Immersion Cooling and Intelligent DCIM (Data Center Infrastructure Management) systems.

Supporting Organization



Assessment Guidelines and Best Practices for Green, Sustainable, Reliable, and Energy-Efficient BEAM Plus Data Centers

Sustainable data centers prioritise environmental responsibility, resource conservation, cost efficiency, regulatory compliance and stakeholder expectations. By adopting sustainable practices, data centers can minimise their environmental impact, optimise resource utilisation, reduce costs, enhance their reputation and foster innovation in the industry.

This presentation will provide comprehensive insights into planning, design, construction and operation of a green, sustainable, reliable and energy-efficient Data Center in accordance with BEAM Plus Data Center assessment tools, covering topics such as site selection, building design, minimisation of operational materials and waste, energy efficient equipment selection, cooling systems, renewable energy integration, water conservation, human environmental quality and operational best practices. Participants will gain knowledge about the key principles, strategies and technologies involved in creating an environmentally friendly and energy-efficient data center while ensuring reliable and high-performance operations.

THE SPEAKERS



Ir Emily Wong

Manager – Project Assessment Section of BEAM Society Limited

Ir Emily Wong is a professional member of the Hong Kong Institution of Engineers in Energy and Building Services Divisions and Chartered Engineer in the membership of the Chartered Institution of Building Services Engineers (CIBSE).

She has practiced as building services professional over 17 years with 9 years working as an E&M consultant to carry out various energy efficient building services system design, sustainability study and green building certification for infrastructure, residential, institutional, recreational, office, commercial and luxury hotel buildings. She is currently a Manager at the Project Assessment Section of BEAM Society Limited, responsible for project assessment works, technical standard development & maintenance, capacity building through training and experience sharing with different stakeholders.

Supporting Organization

