

# Green Data Centre Design (Session 2)

# NEW

# PDUs to be awarded by Professional Engineers Board, Singapore

Date	: 20 & 21 November 2014

# *Time* : 9:00am – 5:00pm

Venue : SEAS Training Centre at Park Mall 9 Penang Road, #08-02 Singapore 238459

Energy expenditures account for the vast majority of the operating costs during a data centre life-time, and this fact is becoming critical in order to ensure business profitability.

This 2-day green data centre design course will equip participants with in-depth knowledge of SS564 and Green Mark for New and Existing Data Centre. The twoday course will also include design best practices and case studies to empower participants with knowledge and ideas to green their data centres.

A 1-day workshop is available to provide an overview of the data centre.

# Objectives

At the end of the course, the participants will be able to:

- Understand Green data centre standards such as Green mark for New and existing data centres
- Apply the best practices in chiller plant, computer room air-conditioning, lighting and uninterruptible power system design
- Optimise, monitor and maintain the data centres at peak energy efficiency

# **Target Audience**

- Data Centre Operations Managers
- · Data Centre Facilities Managers and technicians
- Data Centre Designers and Consultants
- Data Centre Maintenance Contractors
- Singapore Certified Energy Managers
- Government officials involved in Data Centre Energy Efficiency policies and regulations

# **Programme Outline**

# 1. Overview of Data Centre Standards and Regulations

- · Singapore standard SS564 Green Data Centre
- Green Mark for New Data Centre
- Green Mark for Existing Data Centre
- · Policies and trend for Green Data Centre

# 2. Energy Efficiency Air Conditioning Design

- Chilled water system design
  Energy efficient chillers, chilled water pumps, condenser water pumps and cooling towers
- Airside system design
- · Energy efficiency CRACs and AHUs

# 3. Energy Efficient Electrical System Design

- UPS
- Generators
- TransformersPower distribution units
- Power distribution
- Lighting

#### 4. Energy Management System

- Air conditioning system
- Data Centre

#### Organized by:





Supported by:





#### About SEAS

Sustainable Energy Association of Singapore (SEAS) an industry association launched in 2006, today has 160 members in the area of Energy Efficiency, Solar, Wind, Biomass, Carbon and Clean Energy Financing. SEAS aims to be the voice of sustainable energy industry and promote the business of its member companies.

Today, SEAS is also specializing in running trainings, courses and conferences only in the area of sustainable energy. SEAS aims to be the one stop, information and training provider, in the area of sustainable energy. Our trainers and lectures are not only highly qualified academic professionals but also industry specialists and professionals that are successful and sought after practitioners in the area of Sustainable Energy. Majority of Key Qualified Personnel(KQP) and Accredited Energy Services Companies are members of SEAS. They have, as a group successfully executed a multitude of energy projects with varying complexities both locally and regionally.

#### About the Trainer

**Mr Steven Kang** has been involved in the design of hyper-efficient HVAC system for Platinum rated Green Buildings and has been invited to sit in the advisory committee of Platinum rated green buildings. He has spoken at various forums on HVAC designs, energy optimization and green buildings. He has been appointed to assess the design of new data centres as well as audit and improve the energy efficiency of existing data centres. Appointed as Ambassador for the Singapore's Building Construction Authority, he also sits on the committee for Singapore Energy Auditor Certification, Singapore standard on Chiller Plant Measurement and Verification (SS591), Singapore Standard on Air-Conditioning and Mechanical Ventilation in Buildings (SS553) and was in the technical review committee of Vietnam Green Building Council's Sustainable Building Assessment System. Steven is a Singapore Certified Energy Manager (SCEM), a Certified Green Mark Professional (GMP) and a Certified Energy Auditor (EA).

**Mr Lawrence Lim** is the technical director, a data centre design and build specialist contractor. Lawrence has over 20 years of experience in designing and building Data Centres. He has completed several multi-million turn-key data centre projects and is responsible for the 1<sup>st</sup> Green Mark Platinum data centre in Singapore: Keppel Data Centre. He has practical experience that few in this industry has.

Green Data Centre Design (Session 2) Date: 20 & 21 November 2014, Time: 9:00 am – 5:00 pm, Venue: SEAS Training Centre

# **Registration Form**

□ Yes! I would like to register for this programme.

□ I am unable to attend but please put me on your mailing list.

			Early Bird (Registration with payment made on/before 13 Oct 2014)	Normal Fee (Closing Date: 14 Nov 2014)	No. of Delegates	Fee Payable
SEAS Member	Session 2	20 & 21 Nov	S\$650	S\$780		
	Session 1 & 2	□ 30 Sep, 20 & 21 Nov	S\$950	S\$1,200		
Non Member	Session 2	🗆 20 & 21 Nov	S\$780	S\$936		
	Session 1 & 2	□ 30 Sep, 20 & 21 Nov	S\$1,200	S\$1,400		

\* Fees are inclusive of GST.

\* Fees include refreshments, lunch and programme collateral.

\* Enjoy group discount for 4 or more delegates registered at the same time from the same organization

and same billing source.

\* Only one type of discount scheme is applicable at any one time. \* Please print and complete additional sheets where necessary.

#### Participant's Details

1. Name (*Dr/Mr/Mrs/Ms):		NRIC:
Designation:	HP No:	Email:
2. Name (*Dr/Mr/Mrs/Ms):		
Designation:	HP No:	Email:
3. Name (*Dr/Mr/Mrs/Ms):		NRIC:
Designation:	HP No:	Email:

\_\_\_\_\_Fax: \_\_\_\_\_

#### Organization's Details

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

Company Addiess.

Contact Person's Name (\*Dr/Mr/Mrs/Ms): \_\_\_\_\_

Tel: \_\_\_\_

Email:

Sustainable Energy Association of Singapore (SEAS)

\_\_\_\_\_ Postal: \_\_\_\_\_

# Administrative Information

#### **Registration and Payment**

Please complete the enclosed registration form and forward it together with your cheque at least 7 days before the commencement of the programme to

> Sustainable Energy Association of Singapore 9 Penang Road #08-02 Park Mall Singapore 238459

Crossed cheque should be made payable to "Sustainable Energy Association of Singapore" Application will close on 14 November 2014

#### Cancellation

SEAS reserves the right to change programme venue, cancel or reschedule the programme if necessary or warranted by circumstances beyond our control.

There will be no refund of fees for withdrawal. However, if the registration participant is unable to attend, a representative may be allowed to attend at no extra cost. Please inform us of the changes by fax or via email 3 days before the commencement of the programme.

#### Confirmation of Registration

Confirmation of registration will be given 5 working days before the commencement date via email. Registration is confirmed only upon receipt of payment.

If you do not hear from us Please contact Ms Sherlene Lim at: Tel: 63379886 Email: training@seas.org.sg Fax your registration form to 63376658