



S2Lab hopes to bring not only a platform for knowledge exchange for local expertise development, but also collaboration opportunities in the field of sustainable laboratories and high-tech facilities in the tropics and beyond.

The Group's Objectives:

1. Encourage sustainable design and operation of laboratories
2. Develop local expertise in building and operating sustainable laboratories
3. Encourage the development of studies on laboratory building resource use and environmental performance
4. Encourage the development of local guidelines for and case studies of high performance laboratories

Who We Are

About Us

The Singapore Sustainable Lab Group (S2Lab) is a focused interest group under the Sustainable Energy Association of Singapore (SEAS), aiming to bring together experts and key players in laboratory and high-tech facility design, construction, maintenance and operation to discuss topics on energy efficiency, health and safety, and best practices for operation and maintenance. S2Lab is supported by Singapore's National Environment Agency and affiliated with International Institute for Sustainable Laboratories (I2SL) as an international chapter.

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SINGAPORE SUSTAINABLE LABORATORIES GROUP

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SINGAPORE SUSTAINABLE LABORATORIES GROUP

A committee under the Sustainable Energy Association of Singapore, partnered with the Energy Research Institute @ NTU.



How to join?

Join us as a member of SEAS and indicate on your form that you'd like to be a part of the Sustainable Laboratories group. Visit

http://www.seas.org.sg/index.php?option=com_joinus&view=joinus&Itemid=384

Benefits:

- Knowledge exchange and discussion on topics relevant to sustainable laboratories and high-tech facilities in tropical climates through regular meetings and newsletters
- Networking opportunities with local and international industry experts
- Stay connected on Singapore specific and regional topics through dialogues with government agencies
- Complimentary access to other SEAS committee meetings and member only events. Other SEAS committees include: Clean Energy, Energy Efficiency, Sustainable Mobility
- Get connected to government finance assistance schemes and private financing
- Full and Affiliate members only: Complimentary display and management of your company name, logo and profile on the Singapore Sustainable Energy Directory

Laboratories and other high technology facilities such as cleanrooms and hospitals, consume five to ten times the amount of energy when compared to office buildings... therefore it is critical to address the unique energy efficiency challenges for these facilities which are vastly different than typical office buildings.



Typical energy consumption in lab facilities?

- In Singapore, office buildings consume 140-420 kWh/m²/year
- Labs can consume 5-10 times more energy per floor area than office buildings
- Labs can reach up to 100 times more energy than office buildings

Why is energy consumption higher in Labs?

- Typical offices require fresh air of ~ 1 ACH
- Labs often require 100% outdoor air at 6-12 ACH
- Many labs arbitrarily set OA to 15-25 ACH
- Office plug loads 5.4-10.8 W/m² (0.5-1 W/ft²)
- Laboratory plug loads 21.5-215 W/m² (2-20 W/ft²)

This group is supported by:



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