

## **Fact sheet on BCA-IDA Green Mark for Data Centres**

### **When**

Launched 10 October 2012

### **What**

The BCA-IDA Green Mark for Data Centres is a dedicated green building rating system for data centres. It is jointly developed by the Building and Construction Authority and Infocomm Development Authority of Singapore (IDA), with supporting partners from Energy Research Institute @ Nanyang Technological University (ERI@N) and Lawrence Berkeley National Labs (LBNL) in the US.

### **Who it is for**

The scheme covers data centres that may occupy a purpose built data centre building or are part of a larger building.

### **How it works**

The assessment system is a performance-based rating system which awards points for green features, energy efficiency and best practices adopted by the data centres. Based on the total number of points scored a final rating (Platinum, Gold<sup>PLUS</sup>, Gold or Certified) is given.

### **Objective**

To encourage the adoption of energy efficient design, technologies and systems among local data centre operators.

### **Why**

As the nation's commercial data center space is projected to increase by 50% from 2010 to 2015, it is important to look at how green and sustainable data centers are, given their heavy use of energy. Data centers are also growing in size and complexity, which increases cost for businesses.

### **Key benefits**

Improved energy efficiency of data centres leads to reduced energy consumption and operating costs. In some cases, it can result in freeing up of capacity to support more IT systems.

Increased recognition and credibility from clients/partners for environment-friendly practices, which may open up market opportunities for companies.

### **Criteria**

- Energy efficiency
- Water efficiency
- Sustainable Construction & Management
- Indoor environment quality
- Other green features

### **Examples of green features**

- Use of IT equipment that are Energy Star rated
- Use of technologies such as Virtualization, Cloud Computing and Advanced Power management that help to reduce overall power demand from IT equipment
- Use of Modular design that helps to match installed facility capacity with installed IT demand to reduce energy waste

- Energy efficient chiller plants that use variable volume and flow technologies to better match the demand with supply to reduce overall cooling energy use
- Modular Uninterruptible Power Systems that can be phased in as the demand from IT grows to reduce electrical system losses
- Computer Room Air Conditioners (CRACs) that are able to respond to changes in cooling needs by varying the fan speed based on environmental sensors in the server halls
- Operating data centre at higher set point temperature and humidity ranges as per ASHRAE (American Society of Heating, Refrigerating and Air-conditioning Engineers) recommendations to avoid overcooling the data centre
- Use of software tools such as Data Centre Infrastructure Managers (DCIM) that help to optimize data centre capacity planning
- Use of NEWater for the cooling system and other non-potable water uses
- Facility for collection and storage of different recyclable use waste such as IT, plastic, metal and paper waste
- Bi-level lightings for lighting sensor control at each row of server racks

### **How we can help**

To encourage energy efficiency in data centre deployment, a tax incentive, known as Investment Allowance Scheme for Energy Efficiency Projects (Data Centres), has been introduced in June 2012. Companies will be able to claim 30% to 50% of their qualifying expenditure on installation of energy efficient equipment in data centres as tax relief. More information can be found on [www.ida.gov.sg](http://www.ida.gov.sg).