

Data center Acronyms/Buzzwords

BMS - Building Management System

Rack - The most common means of housing server

CRAH/CRAC - Computer Room Air Handler/Computer Room Air Conditioner equipment that used to manage temperature, humidity, and air pressure in facilities.

PUE - Power Usage Effectiveness, calculated by dividing Total Facility Energy Usage by IT Equipment Energy Usage. The closer the PUE ratio is to 1, the more efficient the facility is.

DCiE - Data Center infrastructure Efficiency, which is the inverse of PUE (Power Usage Effectiveness).

HVAC - Heating, Ventilation & Air Cooling

PDU - Power Distribution Unit designed to distribute electrical power to the devices in a cabinet.

SLA - Service Level Agreement. It is a contract between an end-user and service provider that specifies the level of service expected from the service provider.

U - Rack Unit, the measuring mechanism for vertical rack space. 1U is equal to 1.75 inches (44.45 mm) of vertical rack space.

PPA - Power Purchase Agreements. PPA is a long-term contract between an electricity generator and a customer, which can be a utility, government or company. In this context, the company forms an agreement with an energy provider to invest in a renewable energy project such as a wind or solar farm and then procure the output of that facility to cover some or all of the energy requirement of one or more data centers, once the project is live. While it may not directly power data centers, the project's output will be pumped into the grid and mixed with all other energy plants. PPAs are one of the mechanisms to ensure an equivalent amount of a customer's agreed energy demand is being generated by renewable sources.

LDES - Long Duration Energy Storage. LDES is defined as storage systems capable of delivering electricity for 10 or more hours in duration.

LCOE - Levelized Cost of Electricity. LCOE is a measure of the average net cost of energy generation for a generator over its lifetime.

RES - Renewable Energy Sources

Hyperscale - A hyperscale data center differs primarily from traditional data centers by virtue of its larger size. According to one estimate, a hyperscale data center requires a physical site large enough to house all associated equipment—including at least 5,000 servers. Hyperscale data centers can easily encompass millions of square feet of space.

Hyperscaler – The large cloud service providers which own and operate networks of hyperscale data centers.

Average Utilization Rate - Average rate of power usage relative to peak power at a site

Co-location data-center - A colocation data center ('colo') is any large data center facility that rents out rack space to third parties for their servers or other network equipment. This is a very popular service that is used by businesses that may not have the resources needed to maintain their own data center. Cooling and other reliability measures at the colo might be shared by all its customers.

MTDC - Multi-Tenant Data Center

24/7 Carbon-free energy (CFE) matching - means that every kilowatt-hour (KWh) of electricity consumption—every day, everywhere, and at all hours—is met with or “procured” from carbon-free electricity sources.