

FAQ

Note: A terminology index at the end of this document will provide information on wording.



1. WHY A DC EMISSIONS LABEL?

Datacenters (DCs) are a digital economy's physical core infrastructure providing IT services centered around data and built with commodity components to benefit from the economies of scale. The ongoing global digital transformation and the slowdown in conventional growth in silicon-based digital platform capacity and capability will not only boost the number and size of datacenters but also their energy consumption and carbon footprint. This label creates transparency about energy efficiency and the end-to-end climate impact of datacenters. With metrics and ratings that award the best in class in datacenter technologies, this label promotes sustainability for the backbone of a digital economy.

2. WHAT IS THE LABEL?

The SDEA label rates a DC's efficiency and climate impact. The baseline label quantifies DC's energy efficiency index based on an end-to-end energy flow from ingress electricity to recycled heat capturing DC and IT infrastructure as well as workload utilization. The premium variant quantifies a DC's carbon emissions taking into account emissions from ingress energy sources. The label is offered in three grades (bronze, silver and gold) to distinguish the level of criteria fulfillment. The criteria, the certification process and the awarding of the label are defined, controlled and conducted by an independent organization, "Swiss Datacenter Efficiency Association" (SDEA) based in Bern, Switzerland.

3. WHO IS BEHIND THE LABEL?

The idea of an efficiency label for datacenters originated from a [digitalswitzerland](#) challenge to promote interdisciplinary and cross-sector innovation in digital transformation. Several corporate, academic and organizational key players decided to unite forces to create a unique and integrated approach to DC sustainability certification. The Swiss Datacenter Efficiency Association was created in 2019 and the label was launched in January 2020 at the WEF in Davos. The association defines the labeling criteria, the evaluation and the award granting process. Its founding members are [EcoCloud](#) at EPFL, [GreenIT](#), [Hewlett Packard Enterprise](#), [Lucerne University of Applied Sciences and Arts](#), [asut](#) and [SDCA](#).

4. HOW CAN I GET THE LABEL?

To acquire a baseline or premium label for a DC, the applicant must prove that the DC fulfills the labeling criteria during a certification process mandated by SDEA. It is the applicant's responsibility (or an expert mandated by the applicant) to gather the necessary information for this certification process. Applications are accepted through a form available on our website at [sdea.ch](#). Upon receiving the application, SDEA will provide a certification package including detailed documents to guide applicants through certification. The KPI tool to calculate the DC's efficiency level will follow shortly after. Detailed information regarding the measured KPIs can be found in SDEA's KPI Factsheet on [our website](#). The applicant must solicit an auditing company that validates the measured KPIs and files an evaluation report. The SDEA's board members will then review the report and grant the appropriate label according to efficiency level.

5. WHO CAN APPLY FOR THE LABEL?

A label is given to a datacenter instance defined as a combination of DC (e.g. cooling, electricity, heat recycling) and IT (e.g. servers, network, storage) infrastructure hosted in a datacenter campus (a physical location with ingress sources of electricity, water and internet connectivity, and egress for recycled heat). A campus can host one or more datacenter instances.

The label can be awarded in the following two scenarios:

- **DC instance:** In this case, either a single owner owns both the DC and IT infrastructure for the instance or the owner of IT infrastructure uses DC infrastructure provided by the owner of the hosting datacenter campus. In the former case, the entire DC instance will be certified with a label. In the latter case, the DC infrastructure should be separately certified prior to an application for a label for a DC instance with IT infrastructure.
- **DC infrastructure only:** In this case, the owner can provide DC infrastructure for others to host their DC instances. To be able to advertise the efficiency of the DC infrastructure, in this scenario the owner can apply for a label for its DC infrastructure alone calculated with nominal KPIs for IT infrastructure.

6. WHEN WILL THE LABEL BE AVAILABLE?

The labeling criteria for the physical infrastructure and for the IT systems are already defined and the visuals of the label are available. We are in the process of finalizing the details of the evaluation and certification

process. We expect the availability of the certification by Q4 2020. If you are interested in applying for the label, please contact us on the following email: info@sdea.ch.

7. WHAT IS THE LABEL'S LIFETIME?

The award is valid for three years from the day it is granted. During this period, the respective award owner may use the label and communicate on its companies' certification according to our communication guidelines, provided that the labeling fee is paid annually and in time. Upon the expiration of the three-year term, the award has to be re-evaluated for continued use of the label. In addition, the opportunity to reach a higher label if further improvements and initiatives have been put in place is encouraged.

For any further questions, please feel free to contact us at info@sdea.ch.

TERMINOLOGY



DATA CENTER (DC)

Datacenters form the backbone of a digital economy’s infrastructure. In broad terms, datacenters are defined as a collection of Information Technology (IT) system components including computer, network and storage systems together with dedicated space and housing technology for the IT systems including but not limited to electrical, cooling, heat recycling and physical security systems. For the purpose the SDEA label application and evaluation processes, we define the following terminology.

DC INSTANCE

A “DC instance” is defined as a combination of a DC infrastructure instance and one or more IT infrastructure instances. The DC instance defines the basic unit for which a label is awarded. Each DC instance requires a separate application and evaluation to receive a label.

DC INFRASTRUCTURE

The term “DC infrastructure” refers to all equipment including but not limited to electrical, cooling, heat recycling and physical security systems required to host IT infrastructure. A DC infrastructure instance can host one or more IT infrastructure instances.

DC INFRASTRUCTURE INSTANCE

The term “DC Infrastructure Instance” is used for the implementation of a specific DC infrastructure; such an instance can host one or more IT infrastructure instances.

TERMINOLOGY



IT INFRASTRUCTURE

The term “IT infrastructure” refers to computing, networking and storage systems.

IT INFRASTRUCTURE INSTANCE

The term “IT Infrastructure Instance” is used for the implementation of a specific IT infrastructure; such an instance is either owned by the DC operator or, in the case of a co-location relationship, by the respective customer.

PUE+

The term “PUE+” is used for an improved PUE metric, for which we include possible energy recovery options.

CUE

Carbon usage effectiveness (CUE) is a metric for measuring the amount of CO₂ a datacenter emits on a daily basis. The metric was developed by the non-profit consortium, The Green Grid.

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