

Sustainable data center solutions

ABB powers Norway's Lefdal Mine Datacenter

Data centers provide the critical infrastructure for our increasingly connected world, storing all of the data generated by smart devices, businesses and social media. Because they must maintain secure, uninterruptable storage 24 hours a day, data centers are also among the biggest consumers of the world's energy. Norway's ABB-powered Lefdal Mine Datacenter is one of the world's largest and the world's greenest, with a 30-40% energy saving over traditional storage solutions.

Lefdal Mine Datacenter



Operational since
May 2017



Located in a former
underground mine



Built **150 meters**
into a mountain



Storage capacity of
~30 billion gigabytes

Sustainable power sources



Powered exclusively by
renewable energy
produced locally



Clean energy from
4 glacial hydropower
stations and **2 wind farms**

300 MW

Combined
capacity in excess
of 300 MW

Efficient cooling systems



Cooled by water from
Norway's **2nd largest fjord**
(**565 meters deep**)



Server containers can run up
to **50 kW of power** due to
the efficient cooling*



The cooling system will lead to a
PUE (Power Usage Effectiveness)
of **1.08 to 1.15**, making it one of the
greenest data centers in the world

*Typical server containers with traditional air cooling run just **7-8 kW**

Critical power infrastructure supplied by ABB



Medium-voltage backbone
and **power transformers** for
entire facility



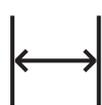
Decentralized **UPS**
(**Uninterruptable Power**
Supply) system provides
reliable power



ABB's power supply solutions
will support the data center's
growth from **10 MW to 200**
MW (comparable to a small
town) over the next **3 years**

Our data center offering

Our data center solutions and integrated systems are designed for heavy-duty applications and the world's ever-increasing data demands. We offer:



Elastic infrastructure that
can grow or shrink with
your demand



Deep visibility into your
infrastructure to make
automation easier



Intelligent grid connections
to give you more choices on
how you manage your energy

Whatever challenges you may be facing, whether it's space saving, modularity and flexibility, energy efficiency, continuous operation or safety and security, we have the solutions you need to overcome them.

Find out more: new.abb.com/data-centers