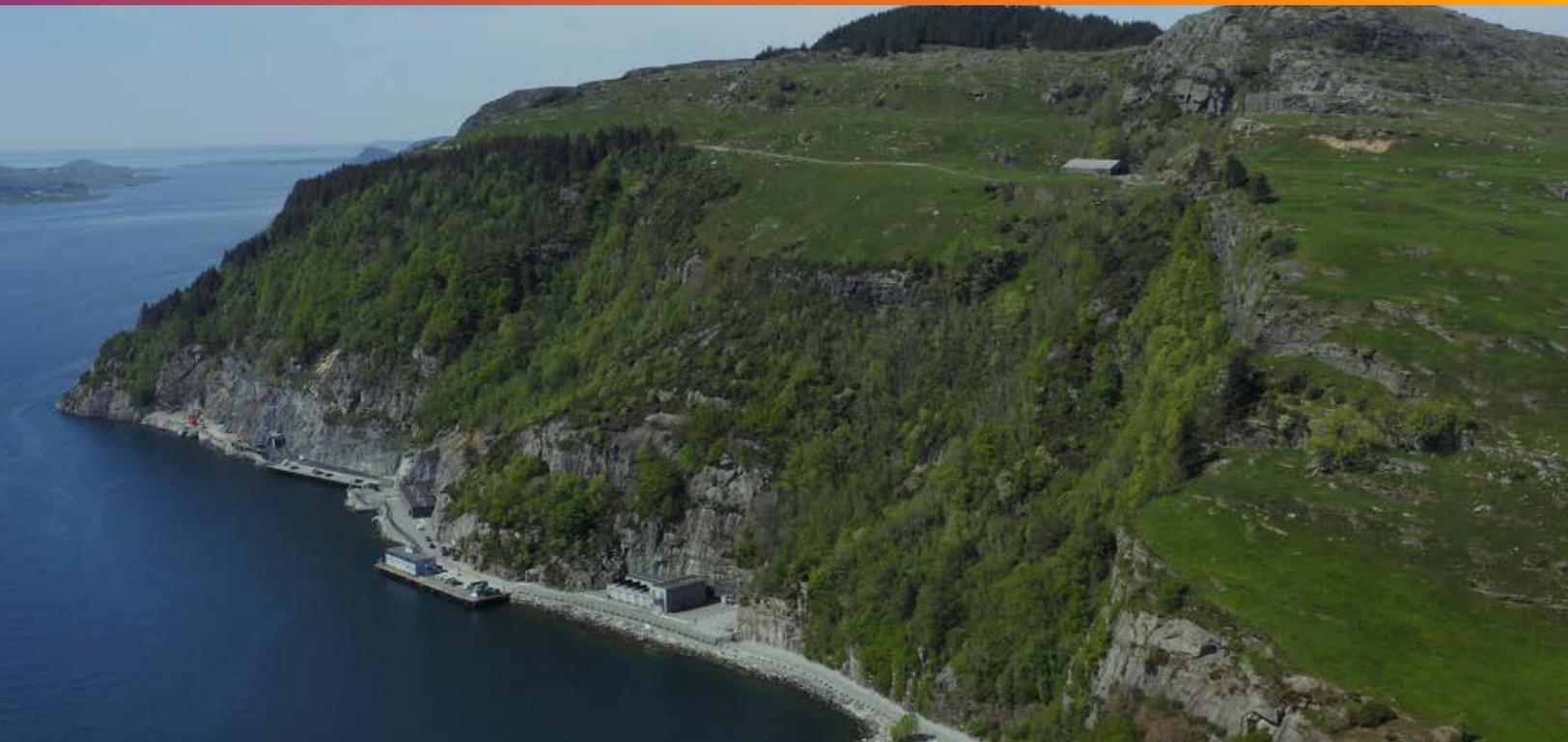


Notably Efficient Green Mountain Deploys Vertiv Solutions to Bolster Sustainability Pursuits



A Vertiv Case Study



Background

One of the largest data centre operators in the Nordics, Green Mountain is clearly committed to the environment as exemplified by its DC1-Stavanger facility that is built deep in a Norwegian mountain.

Running entirely on hydropower, the former high-security NATO ammunition storage facility turned data centre is cooled by fjord water, ensuring a continuous water temperature of 8 degrees Celsius over the year. Spanning 22,600 square meters, this data center serves customers in industries such as financial services, healthcare, and government, and is one of the world's greenest. When procuring a cooling system for a data centre extension at this facility, product and supplier sustainability were key considerations.

Challenge

Selecting the right thermal management system for its unique environment was a top priority for Green Mountain executives. Discovering a thermal management system that offers industry-leading efficiency was just the first step in the team's extensive research. The next step was to physically observe and interact with the equipment, which was accomplished during visits to two Vertiv Customer Experience Centres in Italy.

Deploying the chosen critical infrastructure to a site as remote as DC1 comes with its own logistics issues, but those challenges were compounded by a global pandemic with mandatory closures and stay-at-home orders.

"Managing the project during COVID-19 was super difficult. We were afraid that all factories and deliveries would shut down," Alexander said. "Fortunately, Vertiv stepped up and helped, among other things, deliver equipment and the services related to it. If Vertiv hadn't helped with deliveries, we could not have done the project."



"Sustainability affects everything we do and is very important whenever we build new colocation data centres. All our customers can see where we get our energy. It is a key differentiator for us."

- Alexander de Flon Ronning,
Design and Product Manager
Green Mountain

Solution

Opting to install the Vertiv™ Liebert® PCW chilled water perimeter units in its new data centre space gave Green Mountain 5 megawatts (MW) of additional cooling capacity in its DC1 facility. In addition to third-party certification that guarantees the Liebert PCW complies with the latest standards and performs as advertised, the enhanced components and control strategies of the units gave Green Mountain an extremely efficient solution designed for supporting modern IT applications in all data centre configurations.

“Given that our data centre is in a mountain, we don’t have any extra room,” Alexander said. “We couldn’t blast through more of the mountain to make more space for data centre equipment.”

Interestingly, during the visits to the Italian Customer Experience Centres, Green Mountain executives also found an uninterruptible power supply system for a parallel project. This Vertiv™ Liebert® EXL S1 UPS was deployed to the DC3-Oslo site which offers Green Mountain customers flexibility and scalability while being close to Norway’s most populated area. The 1,200 kilovolt-amperes (kVA) UPS is optimized for maximum efficiency and power density. It gave Green Mountain the smallest footprint available in the market at this power rating, which is up to 60% smaller than some competitor models.

Results

According to Alexander, the Vertiv™ technologies deployed at Green Mountain are the most energy efficient he has seen. And based on the equipment’s power usage effectiveness (PUE), he anticipates the equipment will improve the colocation’s overall efficiency rating, which is already extremely high.

By partnering with data center continuity experts for infrastructure solutions, Green Mountain solidified its commitment to sustainability and ensured its customers will benefit from an optimized operation. The Vertiv organization — deemed “essential” during the pandemic — was also a critical partner that enabled project completion in just nine short months.

The DC1 project is unlikely to be the last joint venture for Vertiv and Green Mountain. “When we build other projects in Norway, we’ll look at Vertiv™ data centre technology,” Alexander said.



Liebert® PCW chilled water unit



Liebert® EXL S1 UPS



“When we select a partner, we do so from a strategic perspective for a long-term relationship.”

- Alexander de Flon Ronning,
Design and Product Manager
Green Mountain

Go online to learn more about the Vertiv™ power and cooling solutions used by Green Mountain or for more about the Norwegian colocation provider.

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