



Green Finance Report 2022

Bulk Infrastructure Group AS





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About Bulk Infrastructure Group AS

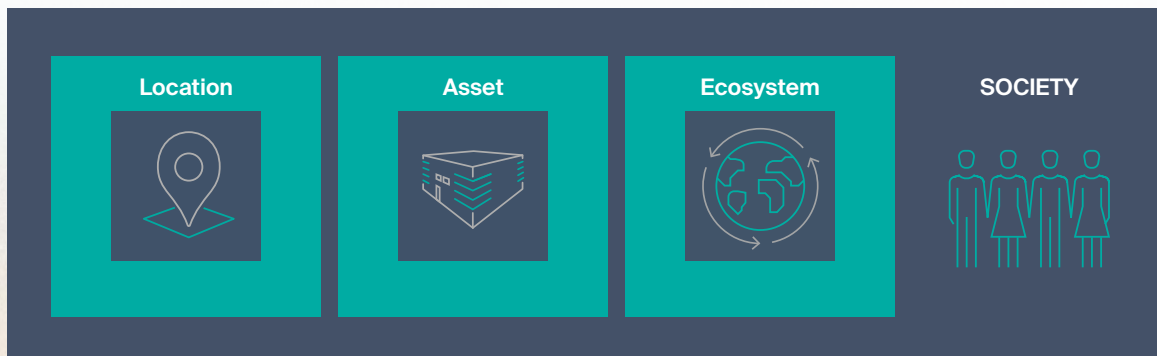
Bulk Infrastructure Group AS (Bulk) is a leading provider of sustainable digital infrastructure in the Nordics. We are an industrial investor, developer, and operator of industrial real estate, data centers, and fiber networks. Bulk believes in the value creation opportunity of enabling our digital society to be fully sustainable. The Group comprises three business divisions that are gaining more independence over time, alongside a Group Management team dedicated to exploring future business prospects and providing support to these divisions. Each of Bulk's business areas influences the environment and society. Accelerating positive impact and reducing potential negative effects are fundamental to Bulk's organizational culture.

Sustainability at Bulk

We define sustainability through an ESG-lens, covering environmental, social and governance factors. We support a precautionary approach to environmental challenges and undertake initiatives to promote responsible business conduct.

Bulk has developed a framework on how we work with sustainability that consists of the perspectives; *Location, Asset, Ecosystem and Society*.

Please refer to our [Green Finance Framework](#) or our website for more information.



Allocation and Impact reporting

The table below summarizes the allocation of net proceeds from the NOK 500 million 2022/26 Senior Unsecured Green Bond, issued in September 2022 under Bulk's Green Finance Framework:

Project Category	Allocated Amount (NOKm)	% of Allocated (%)
New and existing green commercial buildings	-	0%
Renovated green commercial buildings	-	0%
Sustainable digital infrastructure	281.6	56%
Sub-sea data cables	154.9	31%
Energy efficiency	63.5	13%
Eligible / Allocated Amount	500.0	100%
2022/26 NOK 500m Senior Unsecured Green Bond	500.0	
Total Green Financing	500.0	
Unallocated Amount (if any)	-	

Inline with the Green Finance Framework, the green impact has been calculated for all eligible projects.

Project	Eligible project category	Description	Impact indicators
Oslo Internet Exchange (OS-IX)	Sustainable digital infrastructure	Development and acquisition of energy efficient data centers with the criteria of an annual Power Usage Effectiveness (PUE) of 1.35-1.40 or below for data centers housed in renovated and repurposed buildings	Annual PUE 2022 of 1,28
N01 Data Center Campus, Kristiansand - HV Expansion	Energy efficiency	Local strengthening of the electricity grid in Norway with transformer stations and related infrastructure to utilize the renewable energy	Volume of capacity increases in electricity grid infrastructure 100MW
The Havsil cable	Sub-sea data cables	Financing of expenditures related to establishing subsea and terrestrial fiberoptic data-cable connections between countries from higher to lower grid emission factor.	Grid emissions factor in national electricity grid of the countries which are being connected by cables: Norway 7 gCO2e/kWh Denmark 95 gCO2e/kWh

Case studies

– presentation of eligible projects

Oslo Internet Exchange (OS-IX)

Our facility in the heart of Oslo offers easy access and convenience to businesses in the city. It is Norway's largest internet gateway, with access to more than 60 different networks, as well as leading national and Nordic IX providers and Tier 1 carriers. Direct access to major fiber networks and cloud providers guarantees optimal service performance.

The data center is in an old printing press and has been expanded over several phases, through the reuse and renovation of the building. In February 2023, we expanded OS-IX even further by adding 0.8MW of new white space, in addition to the 1.5MW added in the fourth quarter of 2022.

Powered by hydro, it has multiple redundant electrical feeds and systems to ensure the highest levels of uptime, making OS-IX a highly reliable option for our customers. In 2022, the data center had a PUE of 1,28.

In 2023 we launched a 24/7 Power Matching solution at OS-IX, with power consumption being matched against the nearby Bingsfoss hydropower station. This solution enable our customers to verify their data is exclusively powered by 100% renewable energy at every hour of the day.



N01 Data Center Campus, Kristiansand - HV Expansion

Located next to Europe's largest substation, Kristiansand Transformation Station, the N01 Campus in Kristiansand provides affordable energy and high resiliency. The direct connection to the substation minimizes electrical losses and grid expenses. The substation has 12 independent feeds, directly connected to multiple hydro power plants, with uninterrupted power supply since establishment in 1970's.

In 2022, Bulk Data Centers completed the installation of two 125MVA high voltage substations at N01 Campus. These substations are fed from two independent grid connections, delivering 100MW of 100% renewable energy. This development enables the continued construction of the data center campus with superior resilience.

Our progress in constructing the second N01 Campus data center, with 10MW capacity, is on track and expected to launch in late summer. It will cater to High Performance Computing, enterprises, system integrators, and cloud providers. This expansion significantly enhances our capacity to meet our clients' requirements.

Furthermore, we are nearing completion of an additional 160,000 square meters of levelled land at the N01 Campus. This expansion is aimed at accommodating the projected growth in power capacity beyond the existing 100MW already connected to the site.



The Havsil cable

Bulk Havsil, the Nordic express route from Europe, was completed and set into operation early 2022. Havsil is the shortest route connecting Norway with continental Europe and connects Bulk data center N01 Campus close to Kristiansand with Bulk data center DK01 in Esbjerg. Havsil was selected by the Norwegian Communications Authority as the new secure fiber system for the nation's international data traffic, with Arelion as the service provider. The capacity of the fiber system more than doubles the total existing fiber capacity connecting into Norway.

Bulk's fiber networks unlock the Nordic region's sustainable data centers for customers globally. Low latency, high capacity fiber networks ensure that customers no longer need to rely on local data centers powered by non-renewable energy sources. When selecting suppliers, it is a requirement that their operations are run sustainably. Bulk takes care to reduce the environmental impact when fiber routes are planned both subsea and on land. Surveys are done in advance to avoid interfering with spawning grounds for fish and other sea animals.



Calculation approach

When allocating the green financing to eligible projects, we have applied historical cost as a basis for the allocation. Regarding the allocation to Bulk Data Center OS-IX, we have included the value from the acquisition of remaining 50 % of the company. In addition, capital expenditure from acquisition date January 19, 2022, to the issuance of Green Finance framework September 27, 2022, is included in the allocation to this project.

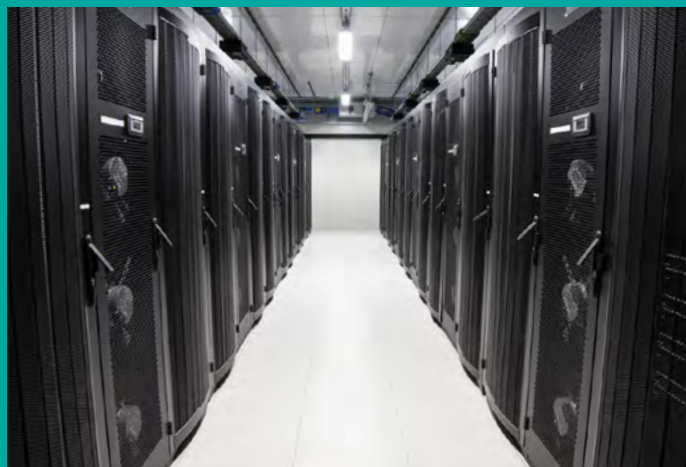
When calculating energy efficient Data Centers, we apply PUE. PUE is the most well-known data center efficiency metric at the moment and is defined in ISO/IEC 30134-2 / EN 50600-4-2. This European Standard specifies the Power Usage Effectiveness (PUE) as a Key Performance Indicator (KPI) to quantify the efficient use of energy in the form of electricity. It calculates the total energy consumption by the facility in relation to the energy that goes into the IT. The

calculation of power usage effectiveness is total data center energy consumption divided by IT equipment energy consumption, which equals PUE.

For our investments in fiber optic cables, we have not included any measures to address CO2 emission reductions or environmental impact measures. It is not obvious how the environmental impact can be measured. Investments in fiber optic cables in the Nordic region primarily enables the routes of digital traffic to move between locations with renewable energy. Hence, the fiber optic cables connect data centers in the Nordic, which can replace data centers in central Europe driven by non-renewable power. As such, we base our impact on renewable energy on the grid of the locations which our fiber cables connect. The data for the grid factors are obtained from the source Carbon Footprint ⁽¹⁾

¹ [2022_03_emissions_factors_sources_for_2021_electricity_v11.pdf \(carbonfootprint.com\)](#).





*Bulk is racing to bring
sustainable infrastructure
to a global audience*



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