



Market Insight Report Reprint

Sustainability is no longer a simple “nice to have” for the datacenter industry

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Improving efficiency could reduce operating costs and help attract new clients. However, it can be hard to determine how best to improve sustainability, while retrofitting older sites can be expensive and run the risk of causing outages. This is now a key area of focus for the industry.

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Introduction

Implementing a sustainability strategy can no longer be considered a “checklist item” for datacenter operators. Datacenters that fail to meet sustainability targets may lose clients, pay higher rates, and perhaps be forced to pay carbon taxes or fees introduced by governments to penalize less “green” companies. In a more stringent regulation and legislation scenario, datacenter operators that are less efficient or not focused on sustainability may be induced to quit their activity altogether if they cannot comply with environmental regulations.

Datacenter operators will increasingly need to comply with investor, client and regulatory requirements around sustainability. On the plus side, improving efficiency could reduce operating costs and attract new clients. However, it can be hard to determine how best to improve sustainability, while retrofitting older sites can be expensive and runs the risk of causing outages. This is now a key area of focus for the datacenter industry, and these challenges were discussed at length at the 2022 Global Datacloud Conference held recently in Monaco.

THE TAKE

Pressure for the datacenter industry to improve sustainability and reduce carbon emissions is coming from multiple sources, including government, financial markets and corporate clients. A sustainability strategy is no longer a simple “nice to have” for datacenter operators; in the future, it may determine whether a datacenter operator succeeds or fails. Additionally, with financial organizations at both ends of the datacenter transaction, as both clients and providers of capital, datacenter owners and operators will need to meet a wide range of sustainability demands when seeking to fund future projects, particularly as pressure increases for PE and real estate investors to make green investments.

Regulatory pressure

Datacenters consume a lot of energy, with some estimates equating their carbon footprint to that of the airline industry. In response to the increasing energy consumption of the industry, in 2008, the European Commission issued a Code of Conduct for Energy Efficiency in Data Centers. The Code is a voluntary initiative managed by the Joint Research Center of the European Commission, which sets ambitious standards for companies willing to participate.

In 2019, the European Commission published the E.U. 2019/424 “Regulation on eco-design requirements for servers and data storage products,” which establishes a set of technical standards that aim to minimize the environmental impact of the datacenter industry. Currently, the European Commission is exploring additional measures to improve energy efficiency for cloud computing and datacenters. In addition, under the European Green Deal, datacenter facilities operating in the E.U. are expected to become carbon-neutral by 2030.

The U.K. Department for Environment, Food and Rural Affairs has also developed an Information and Communication Technologies Sustainability Strategy that involves datacenter facilities and aims to reduce energy usage and carbon emissions while increasing efficiency by adopting a “circular economy” approach.

Similarly, in the U.S., in 2021, lawmakers enacted the New Energy Act, which covers a broad range of energy efficiency initiatives, some of which specifically target the datacenter industry. The Act also requires the government to conduct a study on energy and water usage in the U.S. datacenter industry.

However, as the global economy becomes more and more digitalized, the demand for datacenters is predicted to surge, leading to fears they may consume a larger percentage of total electricity production. To reduce the amount of energy used, environmental sustainability requirements for the industry may become mandatory and more stringent over the next decade. This may include the introduction of a carbon tax for companies that do not meet the requirement of net-zero emissions.

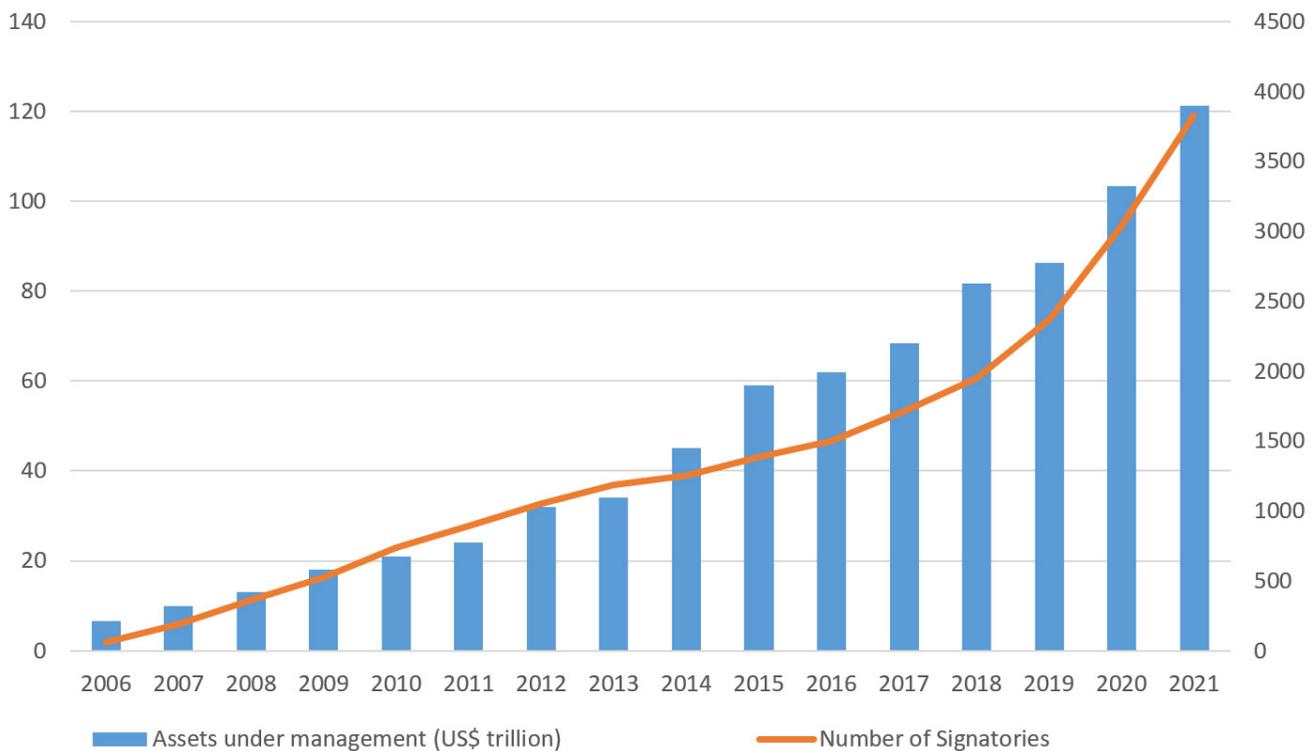
Some governments are also seeking to limit datacenter expansion (e.g., in Dublin and the Netherlands), due in part to fears that their rising demand for electricity will make it harder for governments to meet carbon reduction targets. At the same time, the cost and risk of retrofitting older datacenters to meet potential efficiency and sustainability targets could result in some facilities being retired, leading to a possible shortage of supply in some areas.

Investor pressure

In 2006, the U.N. launched the Principles for Responsible Investment, an initiative that incorporates ESG considerations into investment decisions. In the voluntary guidelines of PRI, investors can screen for certain sectors, issuers or securities that have poor ESG performance relative to industry peers or can screen for companies' assets and securities that have positive ESG performance. This screening can be done for ethical reasons and also to ensure that assets will not suddenly become "stranded" or unable to operate because of regulatory requirements or a change in client preferences.

The year-to-year increase of the number of signatories of the PRI provides an idea of how seriously the financial system is taking sustainability. For example, in 2006 there were 63 signatories with \$6 trillion assets under management (AUM). In 2021, there were 3,826 signatories with \$121.3 trillion AUM.

Figure 1: Principles of Responsible Investment – Signatories and AUM



Source: 451 Research

Signatories of the PRI include banks, private equity firms, hedge funds and investment managers. In March 2022, for example, an investor group including PE firm KKR & Co. Inc. acquired CyrusOne in a transaction worth \$15 billion – the largest deal in the datacenter industry. KKR is the largest PE fund in the world and is a signatory of the PRI. CyrusOne operates more than 50 datacenters worldwide and in 2021 announced that all its datacenters in Europe were running 100% on renewable energy.

Becoming “green” for a publicly traded REIT may also mean the inclusion in ESG stock market indices like the S&P 500 ESG Index and S&P 500 Paris-Aligned Climate Index. The inclusion in such indices could improve companies’ visibility and the appeal to ESG active and passive investors.

Besides providing capital, the financial industry is also a client to datacenter operators. Indeed, banks, stock exchanges, data service providers, fintech and credit card companies often rely on datacenter facilities to secure flexibility, scalability, network speed, low latency and security for their global data exchange. Therefore, financial service companies looking to lease space in a colocation facility may also include sustainability as a selection criterion for a datacenter operator.

Customer pressure

Another prevalent theme at the Global Datacloud Conference is that corporations are under increasing pressure to curb carbon emissions. Scope 1 and 2 emissions of a datacenter facility are the Scope 3 emissions of its clients. In this framework, datacenter operators may need to lower their carbon emissions to attract or retain clients committed to improving their own sustainability footprints.

Tech giants and potential leased datacenter customers have announced commitments to becoming carbon-neutral across their supply chain, with Apple, for example, targeting 2030. In 2021 Twitter announced its decision to set science-based targets for the reduction of Scope 1, 2 and 3 emissions within a maximum of two years. Other digital giants such as Facebook and Microsoft are committed to reaching net-zero emissions across their supply chain (Scope 3) as well. If seeking leased datacenter space, these companies are expected to choose facilities that will achieve net-zero emissions in the near future.

Implementing sustainability strategies

There are plenty of reasons to improve sustainability. It is easier said than done, however, particularly for older facilities that require expensive retrofitting to boost sustainability and could risk an outage by undertaking such a project while operating. Global Datacloud Conference participants widely agreed that a sustainability strategy must be deployed and led by top executives and must integrate IT, regulatory compliance, energy procurement and financial stakeholders within an organization.

A successful strategy requires setting carbon accounting metrics and clear targets for procuring renewables, reducing carbon emissions, improving PUE and using water efficiently. This will be a significant challenge, but the sooner datacenter firms take steps to become more sustainable, the better the chance that they can work in partnership with regulators, investors, local residents and clients – and thus avoid being viewed as an undesirable, energy-hogging industry.

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