interxion
A DIGITAL REALTY COMPANY

GREEN
DATA CENTRES

# Leading the Global Data Centre Industry in Sustainable Environmental Performance

## PIONEERING THE SUSTAINABLE DATA CENTRE


Sustainable practices and environmental stewardship have evolved to become a priority in the global economy. Businesses have shifted their focus on sustainability, integrating it as a core aspect of their enterprise business strategy. With the rapid growth of the digital economy, the demand for data centres is growing in lock step. It's more critical than ever for businesses to maximize efficiency and seek clean energy solutions for their data centre infrastructure.

Data centres provide core digital infrastructure that supports the modern internet economy and forms a part of the wider energy ecosystem. The industry has the power to be at the forefront of environmental, social and governance issues, while focusing on delivering energy efficient data centre designs and operations, and forming partnerships to deliver innovative data centre solutions that are aligned to globally defined sustainable objectives.

While efforts to improve the energy efficiency of data centres – such as cooling system upgrades, expanding the operating parameters of data halls, and optimising air flow by using smart sensors and controls – will remain an important area of focus, organisations are also capturing significant sustainability gains by switching to clean energy. With consumers becoming increasingly aware and interested in social and environmental issues, it is more imperative that organisations look to renewable and carbon-free energy as a sustainable resource for the long term.

> "We are committed to minimising the impact of our operations on the environment, and to supplying our customers the sustainable solutions they want."
>
> – A. William Stein, Chief Executive Officer, Digital Realty

Implementing green practices in data centres not only benefits the planet but is also good for business. The use of renewable energy resources can go a long way in helping businesses attract and retain customers while helping them achieve sustainable objectives.

As a company, we are committed to bring our emissions in-line with a significantly below two-degree climate change scenario by 2030. Some of our notable sustainability initiatives include our Global Renewable Energy programme which aims to make 100% renewable energy available to customers.

## DRIVING SUSTAINABILITY IN EMEA

In EMEA, the recent combination of Digital Realty and Interxion to form Interxion: A Digital Realty Company, is the coming together of two of the major global proponents of sustainability in the data centre industry. Each with solid track records in driving the sustainability agenda through a blend of technical innovation, sector engagement and working with governments to deliver effective policy outcomes. The business combination now creates a more effective force to deliver sustainability at an enhanced scale.

### Energy Procurement

- The combined electricity supplies constituting Interxion's EMEA portfolio are 100% renewably sourced
- The road to 100% renewable has been ongoing for several years and was achieved at the end of 2018
- The Energy Procurement Team continually review the renewable energy landscape and work with both suppliers and customers to deliver innovative renewable energy solutions

### Technical Innovation in Sustainability

- Interxion's data centre designs evaluate best available technology with respect to minimising environmental impact. For example:
    - Digital Docklands in London utilises dock water cooling to reduce energy and water consumption
    - In Amsterdam, we are collaborating with local planners to find ways to export waste heat to a nearby new housing development
    - Energy efficient indirect free air cooling has been incorporated into data centre designs since 2006
    - The company's Amsterdam data centres use Aquifier Thermal Energy Storage – an *environmentally-friendly, resilient and affordable technology to reduce energy consumption by* maximising the earth's natural capacity to store thermal energy
    - In 2017, Interxion launched an initiative with Reforestum, a Spanish-based NGO to offset its carbon footprint by supporting Génesis, a reforested area close to Picos de Europa certified by the Ministry for Ecological Transition as a carbon capture project. Interxion has acquired rights to offset the carbon footprint equivalent to 478m$^2$ – a total area of close to 5 hectares and around 5,000 trees
    - In 2018, through successful collaboration with the French authorities, we have been able to deploy an advanced technology using river water to cool our data centres in Marseille
    - Since 2015 the company has been an active partner to Stockholm's Open District heating project, connecting our data centres to the district heating network and enabling 'waste energy' to heat people's homes. Through the partnership, our Stockholm data centres contribute to heating thousands of homes in the nearby region
    - In Copenhagen, Interxion's campus has since 2015 been utilizing Groundwater cooling
    - Following a successful proof of concept project at one of our London data centres in 2019, which saved 20% of the site's cooling system energy consumption, we are now rolling this technology out across more data centres both in EMEA and the US
    - With an eye on the future, most of our data centres in EMEA are designed to incorporate liquid cooling as and when the market evolves to make use of the technology

### Industry Leadership

- In 2008, the company was one of the first organisations in EMEA to join the Green Grid
- The company is represented on the expert committee overseeing the EU Code of Conduct for Data Centres best practices, within the European Commission's Joint Research Centre
- The company is a founding member of the Uptime Institute EMEA, an advisory organisation focused on improving the performance, efficiency and reliability of business-critical infrastructure
- Interxion is represented on techUK's Data Centre Council – the body representing the UK's technology industry. Through council engagement, Interxion actively works with government on supporting the development of effective policy outcomes
- Interxion was part of the techUK team that negotiated implementation of the UK's Climate Change Agreement (CCA) with government in 2014. All Interxion's UK data centres now participate in the CCA
- Interxion is represented on the technical committee responsible for development of the EN 50600 series of data centre design standards
- Interxion is a member of the European Data Centre Association and regularly contributes data centre policy responses to EU government

## GLOBAL SUSTAINABILITY CREDENTIALS

- Green bonds: Digital Realty has become the largest REIT industry issuer of green bonds. We issued €1.1 billion in green bonds in early 2019 and followed that with another €1.4 billion issuance in January 2020, at very attractive rates. Proceeds from our 2019 bonds have been fully allocated to a portfolio of green data centre, energy efficiency and renewable projects
- We received ENERGY STAR® certification for 29 data centres, the most in the industry and became the first data centre provider to become an ENERGY STAR® Partner. We added five newly developed LEED™ and BREEAM® certified data centres to our portfolio in four global markets
- Our sustainability efforts were recognised for the third consecutive year in 2019 with NAREIT's Leader in the Light Award as the Data Centre Sector Leader for excellence in sustainability. Digital Realty also received the ENERGY STAR® Partner of the Year Award and was added to the FTSE4 Good index series in 2019
- Through industry leadership and regional government engagement, we are actively working to support decarbonisation of the data centre industry on a global scale
- With a long-term goal of making 100% renewable energy available to customers, the US colocation business and all our EMEA portfolio are already 100% renewably sourced

- In June 2020 we published our 2019 ESG report. Key highlights include:

Renewable Energy

- Digital Realty added 50 megawatts (MW) of new renewable energy supply in 2019, for a total of 324MW of solar and wind energy under contract
- More than half (54%) of the electricity consumed globally is carbon free, including 100% renewable energy for its EMEA properties and 100% wind power for its U.S. colocation data centres

Green Buildings and Energy Efficiency

- Digital Realty leads the data centre industry with 650MW of green building certifications

- Looking ahead, we're excited to have announced our commitment to setting global carbon reduction goals through the Science Based Targets initiative (SBTi), taking a rigorous and holistic approach to addressing our global impact. In fact, Digital Realty is the first large scale, global data centre company to commit to a science-based target

"Now, more than ever, we are sharpening our focus on sustainability at Digital Realty, from resilience to our carbon emissions. Our new science-based target commitment illuminates our holistic, business-wide strategy to addressing our global impact."

– Aaron Binkley, Senior Director of Sustainability

## GLOBAL RESOURCE MANAGEMENT AND CERTIFICATIONS

In a growing number of markets, certification is becoming an expected feature for project approval by local authorities. Digital Realty's data centres are designed to reduce environmental impacts, require fewer construction materials to construct, and deliver industry leading PUE levels. This results in a smaller carbon footprint when compared to similar data centres. Digital Realty has completed more than 60 green building certifications globally since 2007, more than any other data centre developer.

BCA Green Mark Scheme | BREEAM | CEEDA | ENERGY STAR® CERTIFICATION | Green Globes | LEED | NABERS

A significant proportion of the EMEA portfolio is certified to ISO 14001 (Environmental Management System) and ISO 50001 (Energy Management System).

In addition to internally reporting on and driving down PUE numbers across the portfolio, the company has, in 2019, started monthly reporting on water usage and WUE.

## GLOBAL AWARDS AND RECOGNITION

Digital Realty's sustainability efforts continue to gain global attention and have been recognised by the following organisations:

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| ASHRAE – Honourable Mention Category IV: Industrial Facilities or Processes | ASHRAE – Region VI: First Place; Industrial Facilities | DatacenterDynamics Awards – North America Region: Improved Data Centre Efficiency, EL Segundo, California |
| DatacenterDynamics Awards – Asia Pacific Region: Energy Efficiency Improver's Award | DatacenterDynamics Awards – Asia Pacific Region: Data Centre Critical Environment Team of the Year | DatacenterDynamics Awards – EMEA Region: Energy Smart Award Shortlist |
| Datacloud – Outstanding Green Data Centre: Crawley, England | ENERGY STAR® – EPA Energy Star for Data Centres | EPA Green Power Partnership – Top 100 EPA Green Power Partnership |
| Global Carrier Awards – Best Data Centre Shortlist | NAREIT Leader in the Light Award Winner, Data Centre Sector 2017, 2018 | GRESB Green Star 2017, 2018 |
| 2018 Green Lease Leader, Institute for Market Transformation and US department of Energy | Sustainability Award 2018 – 2018 Sustainability Award | Sustainable Purchasing Leadership Council – Sustainable Purchasing Leadership Council |
| Tech Excellence Awards – Data Centre of the Year, Dublin | The Climate Registry – Cool Planet Award | Uptime Institute – Brill Award for Efficient IT; Product Solution EMEA |
| | Green IT Operator of The Year (EMEA) | |