UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2022

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ____________ to ____________

Commission file number 001-40205

EQUINIX, INC.
(Exact name of registrant as specified in its charter)

Delaware	**77-0487526**
(State of incorporation)	(IRS Employer Identification No.)

One Lagoon Drive, Redwood City, California 94065
(Address of principal executive offices, including ZIP code)

(650) 598-6000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, $0.001	EQIX	The Nasdaq Stock Market LLC
0.250% Senior Notes due 2027		The Nasdaq Stock Market LLC
1.000% Senior Notes due 2033		The Nasdaq Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common stock held by non-affiliates computed by reference to the price at which the common stock was last sold as of the last business day of the registrant's most recently completed second fiscal quarter was approximately $60.0 billion. As of February 16, 2023, a total of 92,744,713 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III – Portions of the registrant's definitive proxy statement to be issued in conjunction with the registrant's 2023 Annual Meeting of Stockholders, which is expected to be filed not later than 120 days after the registrant's fiscal year ended December 31, 2022. Except as expressly incorporated by reference, the registrant's proxy statement shall not be deemed to be a part of this report on Form 10-K.

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FORM 10-K
December 31, 2022

PART I

Forward-Looking Statements

The words "Equinix", "we", "our", "ours", "us" and the "Company" refer to Equinix, Inc. All statements in this discussion that are not historical are forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding Equinix's "expectations", "beliefs", "intentions", "strategies", "forecasts", "predictions", "plans" or the like. Such statements are based on management's current expectations and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Equinix cautions investors that there can be no assurance that actual results or business conditions will not differ materially from those projected or suggested in such forward-looking statements as a result of various factors, including, but not limited to, the risk factors discussed in this Annual Report on Form 10-K. Equinix expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward looking statements contained herein to reflect any change in Equinix's expectations with regard thereto or any change in events, conditions, or circumstances on which any such statements are based.

Summary of Risk Factors

Our business is subject to numerous risks and uncertainties that make an investment in our securities speculative or risky, any one of which could materially adversely affect our results of operations, financial condition or business. These risks include, but are not limited to, those listed below. This list is not complete, and should be read together with the section titled “Risk Factors” in this Annual Report on Form 10-K, as well as the other information in this Annual Report on Form 10-K and the other filings that we make with the U.S. Securities and Exchange Commission (the “SEC”).

Risks Related to the Macro Environment

- Inflation in the global economy, increased interest rates and adverse global economic conditions, like the ones we are currently experiencing, could negatively affect our business and financial condition.
- We are currently operating in a period of economic uncertainty and capital markets disruption, which has been the result of many global macro-economic factors including the ongoing military conflict between Russia and Ukraine. These macro-economic and other factors could negatively affect our business and financial condition.
- Our business could be harmed by increased costs to procure power, prolonged power outages, shortages or capacity constraints as well as restrictions on access to power.

Risks Related to our Operations

- We experienced an information technology security breach in the past and may be vulnerable to future security breaches, which could disrupt our operations and have a material adverse effect on our business, results of operation and financial condition.
- Any failure of our physical infrastructure or negative impact on our ability to meet our obligations to our customers, or damage to customer infrastructure within our IBX data centers, could lead to significant costs and disruptions that could reduce our revenue and harm our business reputation and financial condition.
- We are currently making significant investments in our back-office information technology systems and processes. Difficulties from or disruptions to these efforts may interrupt our normal operations and adversely affect our business and results of operations.
- The level of insurance coverage that we purchase may prove to be inadequate.
- If we are unable to implement our evolving organizational structure or if we are unable to recruit or retain key executives and qualified personnel, our business could be harmed.
- The failure to obtain favorable terms when we renew our IBX data center leases, or the failure to renew such leases, could harm our business and results of operations.
- We depend on a number of third parties to provide internet connectivity to our IBX data centers; if connectivity is interrupted or terminated, our results of operations and cash flow could be materially and adversely affected.
- The use of high power density equipment may limit our ability to fully utilize our older IBX data centers.

Risks Related to our Offerings and Customers

- Our offerings have a long sales cycle that may harm our revenue and results of operations.
- We may not be able to compete successfully against current and future competitors.
- If we cannot continue to develop, acquire, market and provide new offerings or enhancements to existing offerings that meet customer requirements and differentiate us from our competitors, our results of operations could suffer.
- We have government customers, which subjects us to risks including early termination, audits, investigations, sanctions and penalties.
- Because we depend on the development and growth of a balanced customer base, including key magnet customers, failure to attract, grow and retain this base of customers could harm our business and results of operations.
- Industry consolidation may have a negative impact on our business model.

Risks Related to our Financial Results

- Our results of operations may fluctuate.
- We may incur goodwill and other intangible asset impairment charges, or impairment charges to our property, plant and equipment, which could result in a significant reduction to our earnings.
- We have incurred substantial losses in the past and may incur additional losses in the future.

Risks Related to Our Expansion Plans

- Our construction of new IBX data centers or IBX data center expansions could involve significant risks to our business.
- Acquisitions present many risks, and we may not realize the financial or strategic goals that were contemplated at the time of any transaction.
- The anticipated benefits of our joint ventures may not be fully realized, or take longer to realize than expected.
- Joint venture investments could expose us to risks and liabilities in connection with the formation of the new joint ventures, the operation of such joint ventures without sole decision-making authority, and our reliance on joint venture partners who may have economic and business interests that are inconsistent with our business interests.
- If we cannot effectively manage our international operations, and successfully implement our international expansion plans, or comply with evolving laws and regulations, our revenues may not increase, our costs may increase and our business and results of operations would be harmed.
- We continue to invest in our expansion efforts but may not have sufficient customer demand in the future to realize expected returns on these investments.

Risks Related to Our Capital Needs and Capital Strategy

- Our substantial debt could adversely affect our cash flows and limit our flexibility to raise additional capital.
- Sales or issuances of shares of our common stock may adversely affect the market price of our common stock.
- If we are not able to generate sufficient operating cash flows or obtain external financing, our ability to fund incremental expansion plans may be limited.
- Our derivative transactions expose us to counterparty credit risk.

Risks Related to Environmental Laws and Climate Change Impacts

- Environmental regulations may impose upon us new or unexpected costs.
- Our business may be adversely affected by climate change and responses to it.
- We may fail to achieve our environmental goals which may adversely affect public perception of our business and affect our relationship with our customers, our stockholders and/or other stakeholders.

Risks Related to Certain Regulations and Laws, Including Tax Laws

- Changes in U.S. or foreign tax laws, regulations, or interpretations thereof, including changes to tax rates, may adversely affect our financial statements and cash taxes.
- Government regulation or failure to comply with laws and regulations may adversely affect our business.

- Our business could be adversely affected if we are unable to maintain our complex global legal entity structure.

<u>Risks Related to Our REIT Status in the US</u>

- We have a number of risks related to our qualification as a real estate investment trust for federal income tax purposes ("REIT"), including the risk that we may not be able to maintain our qualification as a REIT which could expose us to substantial corporate income tax and have a materially adverse effect on our business, financial condition, and results of operations.

ITEM 1. Business

Overview: Powering the World's Digital Leaders

Equinix is the world's digital infrastructure company ™. Digital leaders harness our trusted platform to bring together and interconnect the foundational infrastructure that powers their success. We enable our customers to access all the right places, partners and possibilities they need to accelerate their advantage. Platform Equinix® combines a global footprint of International Business Exchange™ ("IBX ®") and xScale® data centers in the Americas, Asia-Pacific, and Europe, the Middle East and Africa ("EMEA") regions, interconnection solutions, digital offerings, unique business and digital ecosystems and expert consulting and support. Equinix was incorporated on June 22, 1998, as a Delaware corporation and operates as a REIT for federal income tax purposes.

Al Avery and Jay Adelson founded Equinix as a network-neutral, multi-tenant data center ("MTDC") provider, where competing networks could connect and share data traffic to help scale the rapid growth of the early internet. The company's name, Equinix (composed from the words "equality", "neutrality" and "internet exchange"), reflects that vision. The founders also believed they not only had the opportunity but also the responsibility to create a company that would be the steward of some of the most important digital infrastructure assets in the world. Nearly two and a half decades later, we have expanded upon that vision to build Platform Equinix, which we believe is unmatched in scale and reach.

Our interconnected data centers around the world allow our customers to bring together and interconnect the infrastructure they need to fast-track their digital advantage. With Equinix, they can scale with agility, speed the launch of digital offerings, deliver world-class experiences and multiply their value. We enable them to differentiate by distributing infrastructure and removing the distance between clouds, users and applications in order to reduce latency and deliver a superior customer, partner and employee experience. The Equinix global platform, and the quality of our IBX and xScale data centers, interconnection offerings and edge solutions, have enabled us to establish a critical mass of customers. As more customers choose Platform Equinix for bandwidth cost and performance reasons, it benefits their suppliers and business partners to colocate in the same data centers and connect directly with each other. This adjacency creates a network effect that attracts new customers, continuously compounds our existing customers' value and enables them to capture further economic and performance benefits from our offerings.

In 2022, we opened or acquired 13 new IBX data centers, opened three new xScale data centers via our joint ventures, and entered three new markets resulting in an increase in our total number of IBX and xScale data center facilities to 248. 2022 highlights include:

- New data center openings included 13 new IBX sites in the following metros: Abidjan, Accra, Genoa, Lagos, Lima, Munich, Manchester, Paris and Santiago.
- Three additional xScale sites opened in 2022 in Frankfurt, Dublin and Sydney, bringing our total number of xScale data centers to 11. xScale data centers serve the needs of the growing hyperscale data center market, including the world's largest cloud service providers, and are engineered to meet the technical and operational requirements and price points of core hyperscale workload deployments. xScale data centers also offer access to our comprehensive suite of interconnection and edge offerings that tie into the hyperscale companies' existing access points at Equinix, thereby increasing the speed of connectivity to their existing and future enterprise customers. In xScale sites, hyperscale companies can consolidate core and access point deployments into one global provider to streamline and simplify their growth.
- In December, we announced plans to enter the South Africa market with a $160 million IBX data center investment in Johannesburg that augments our current footprint on the African continent. With our South Africa expansion, Equinix is entering one of the largest and most digitally developed nations on the African continent. The new data center is expected to open in the middle of 2024.
- In November, we announced plans to enter the Malaysia market with a $40 million IBX data center investment. Equinix's expansion in Malaysia will offer opportunities for Malaysian businesses expanding internationally and for multinational corporations pursuing growth and innovation in the Malaysian market. Located in Johor, the new data center is expected to open in the first half of 2024.
- In October, we announced our plans for expansion into Indonesia, with an approximately $74 million IBX data center investment in the heart of Jakarta. Driven by rapid business digitalization and a substantial digital-savvy population, Indonesia has emerged as Southeast Asia's largest digital economy in value, and is expected to be a key hub of interconnection in the region.
- We also announced in October a $45 million investment in a new facility in Bogota, Colombia, scheduled to open in the first half of 2023. This will be our second data center in Colombia and further reinforces Equinix’s commitment to strengthening the digital economy across Latin America.
- In September, we opened a new IBX data center in Paris, France. Part of Equinix's Saint-Denis campus, the new site ("PA10") represents the tenth data center opened by Equinix in Paris. The new $163 million facility will incorporate multiple sustainability best practices, including heat recovery technology directly connected to Paris’s Saint-Denis urban heating network.
- In August, we completed our acquisition of a data center in Lima, Peru, from Empresa Nacional De Telecomunicaciones S.A. ("Entel"), a leading Chilean telecommunications provider, for a total purchase consideration of $80.3 million at the exchange rate in effect on the date of signing.
- In June, Equinix and PGIM Real Estate, the real estate investment and financing arm of PGIM, Prudential Financial's global asset management business, opened the first xScale data center in Sydney ("SY9x"). This milestone followed the closing of the $575 million joint venture between the parties in March of 2022.
- Extending our presence deeper into Latin America in May, we completed the acquisition of four data centers in Chile, from Entel, for a total purchase consideration of $638.3 million at the exchange rate in effect on the date of signing.
- In April, we entered Africa, closing on our $278.4 million acquisition of MainOne, a leading West African data center and connectivity solutions provider, with presence in Nigeria, Ghana and Côte d'Ivoire. The completion of the acquisition augmented Equinix's long-term strategy to become a leading African carrier-neutral digital infrastructure company by being able to bring a full range of transformative technologies and connectivity to Nigeria, Ghana and Cote d'Ivoire.
- Our new IBX data center in Aschheim, near Munich, Germany (“MU4”), opened in February to support the growing digital needs of local companies—particularly from the automotive, industrial, financial and healthcare sectors—providing them with direct, secure and fast connectivity to a multitude of cloud providers, services and partners. Like other new Equinix builds in Germany, it was designed in line with Equinix’s global sustainability strategy, featuring a green façade and partially planted roof. Additionally, the data center is expected to be powered by 100% renewable energy—purchased through a green power certificate from local supplier, Mainova.

- In January, we signed a joint venture agreement with GIC in Singapore to develop and operate two xScale data centers in Seoul, Korea. The joint venture will bring our global xScale data center portfolio to more than $8 billion across 36 facilities.

Industry Trends: Large-scale global trends are driving a digital-first strategy

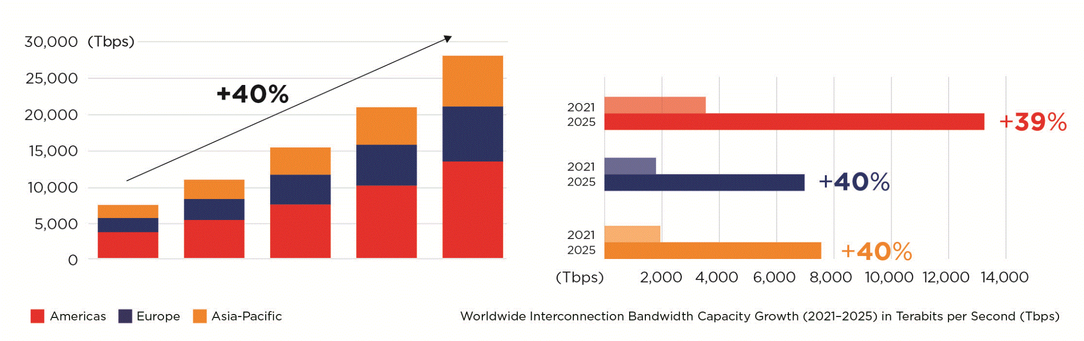
Digital transformation is changing where and how businesses deploy and deliver IT services to employees and is creating new digital business models for partners and customers. The convergence of these global trends has created additional pressure for many companies to transform. The collective influence of these trends is driving complexity and risk that must be addressed in multiple locations for companies to effectively compete in the global digital economy. These trends include:

- **The digital presence trend** underpins businesses’ prioritization of transformation to engage and deliver value electronically. To compete in the digital economy, organizations are shifting to digital solutions. Digital transformation investment levels for 2022–2024 are expected to be $6.3 trillion and 55% of all Information and Communication Technology ("ICT") investment by the end of 2024. This forces the need for a digital infrastructure optimized for proximity to, and interconnection with, networks and clouds. This in turn enables digital development with elastic scale. IT becomes a revenue-generating function and the basis of competitive advantage for developing connected product bundles.
- **The digital participation trend** is digitizing trade and accessing digital marketplaces (digital B2B commerce) where goods and services are exchanged in the digital economy. Leveraging ecosystem and network effects optimizes collaboration and compounds business value. By 2023, it is expected that one in two companies will generate more than 40% of their revenues from digital products and services. The Global Interconnection Index 2023 ("GXI 2023"), a market study published by Equinix, shows that this forces the need to interconnect digital infrastructure with research communities, supply chains and marketplaces, enabling composable business models. IT becomes a business technology broker across an ecosystem of digital solutions and facilitates collaboration with network effects.
- **The digital proximity trend** means digitizing the front office for localized and personalized delivery—to customers, employees and operations where business happens, as well as digitizing the physical world for the physical infrastructure and operations intelligence needed to optimize commercial and environmental impact. By 2028, the global infrastructure edge footprint is expected to be 40 gigawatts, with 63% supporting healthcare, manufacturing, energy, retail and transportation. IT becomes fully integrated with operational technology ("OT") to balance transparency, efficiency and sustainability with greater mobility, security and control.
- **The sustainability trend** means that companies are now being held accountable by investors, employees and customers to demonstrate progress on Environmental, Social and Governance ("ESG") commitments. Sustainability is believed to be important by 90% of executives, but only 60% of organizations have sustainability strategies. These strategies include setting and measuring sustainability goals through science-based targets and key initiatives. IT must subscribe to the most efficient commodity solutions from sustainability leaders.

These trends are accelerating the need for companies like Equinix that can provide a secure, agile global business platform that leverages digital interconnection—or private data exchange—to deliver real-time interactions around the world.

As part of their digital transformation, businesses in most industries are shifting their centralized IT infrastructures to the edge to bring digital solutions closer to users for better performance, which has become a significant driver of digital business value. To realize the full potential of the edge, IT organizations require greater interconnection bandwidth. Interconnection bandwidth is defined as the total capacity provisioned to privately and directly exchange traffic, with a diverse set of partners and providers, at distributed IT exchange points inside carrier-neutral colocation data centers. Private interconnection capacity between businesses, as reported in GXI 2023, is anticipated to grow at a compound annual growth rate of 40% by 2025, reaching 27,762 terabits per second of data exchanged annually.

Worldwide Interconnection Bandwidth Capacity Growth (2020 - 2025) in Terabits per Second (Tbps)



Source: GXI 2023

Equinix Business Proposition: To be the platform where the world comes together, enabling the innovations that enrich our work, life and planet

In 2022, we continued to build new digital and data center offerings to further our vision to power the world's digital leaders. On Platform Equinix, digital leaders can reach the most strategic global markets with the largest ecosystem of digital partners, with infrastructure that assembles and deploys virtually in minutes. We enable competitive advantage for our customers and partners by creating the foundational infrastructure capabilities that power worldwide businesses. We offer a comprehensive, integrated suite of data center and digital solutions and products to over 10,000 enterprise and service provider customers worldwide.

The following are the leading revenue-generating product and other offerings that collectively make up Platform Equinix:

Data Center Offerings

Our global, state-of-the-art data centers meet strict standards of security, reliability, certification and sustainability. Offerings in these data centers are typically billed based on the space and power a customer consumes, are delivered under a fixed duration contract and generate monthly recurring revenue ("MRR"). Our footprint consists of 248 data centers:

- **International Business Exchange Data Centers** are our vendor-neutral colocation data centers worldwide, providing our customers with secure, reliable and robust environments (including space and power) that are necessary to aggregate and distribute information and connect digital and business ecosystems globally. IBX data centers provide access to vital ecosystems where enterprises, network, cloud and SaaS providers, and business partners, can directly and securely interconnect to each other.

- **xScale Data Centers** are designed to serve the unique core workload deployment needs of a targeted group of hyperscale companies, which include the world's largest cloud service providers. With xScale data centers, hyperscale customers add to their core hyperscale data center deployments and existing customer access points at Equinix, allowing streamlined expansion with a single global vendor.

Equinix colocation offerings include a suite of comprehensive solutions that provide all the components required by a customer to house its IT infrastructure (or equipment). These offerings are designed to speed and streamline digital transformation and data center deployments for our customers.

- **Private Cages** are typically designed and built to order for a single customer, with space assigned based on purchased power allocations and planned cabinet quantity. A cage typically includes steel mesh walls with a locking door, interconnection provision such as a demarcation rack with patch panels, and cabling systems such as a ladder rack and fiber raceway. Available security accessories include dedicated cameras, biometric hand scanners and more.
- **Secure Cabinets** are steel-framed cabinets sized to industry standards, with lockable, fully ventilated doors, and are typically configured to order. Secure Cabinets provide a private, secure, smaller-footprint alternative to a Private Cage. Each cabinet includes an integrated, interconnection-ready demarcation panel and power circuitry sufficient to support planned utilization requirements. Secure cabinets are typically housed in a shared, secured cage within the data center facility.
- **Secure Cabinet Express** are ready-for-service Secure Cabinets which are pre-configured to an Equinix recommended, and most common, cabinet configuration. This configuration fits the majority of modern IT deployment requirements, providing a simplified and globally consistent colocation module for cabinet-sized deployments.

Equinix offers a variety of enabling solutions which support a customer's need to implement, operate and maintain their colocated deployments. These solutions include both on-consumption and subscription services which may generate monthly recurring revenue ("MRR") as well as non-recurring revenue ("NRR").

- **IBX SmartView®** is a fully integrated monitoring software which provides customers visibility into the operating data relevant to their specific Equinix footprint as if they were in-house. The software provides online access to real-time environmental and operating data through the Equinix Customer Portal or via either REST (APIs that provide customers the ability to retrieve information about their assets from every IBX location) or streaming API integrations. With real-time alerts and configurable reporting, IBX SmartView allows customers to maintain their IBX operations and plan for future growth.
- **Equinix Smart Hands®** provides around-the-clock, on-site operational support service for remote management, installation and troubleshooting of customer data center equipment. Using Equinix IBX data center technicians, Smart Hands allows customers to manage their Platform Equinix data center operations from anywhere in the world.
- **Equinix Infrastructure Services (EIS)** provides customers with a simple one-stop shop to purchase and deploy a world-class colocation deployment. EIS are repeatable, proven processes which address larger, more complex data center jobs, including installation and implementation of new builds, and planned migrations. EIS practices deliver Equinix expertise in colocation design to optimize our customers' data center needs, including structured cabling, labelling and documentation, procurement recommendations and coordination, and secure de-installation.

Interconnection Offerings

Our interconnection solutions connect businesses directly, securely and dynamically within and between our data centers across our global platform. These solutions are typically billed based on the outbound connections from a customer and generate MRR.

- **Equinix Fabric®** provides secure, on-demand, software-defined interconnection. Built specifically for digital infrastructure, Equinix Fabric enables businesses to connect globally to their choice of thousands of networking, storage, compute and application service providers in the industry's largest infrastructure ecosystem. As the foundation of Platform Equinix's interconnection capability, Equinix Fabric also enables customers to quickly and easily connect between the physical and virtual digital infrastructures they have deployed in Equinix data centers globally.

- **Cross Connects** provide a point-to-point cable link between two Equinix customers in the same data center. Cross Connects deliver fast, convenient, affordable and highly reliable connectivity and data exchange with business partners and service providers within the Equinix ecosystem.
- **Equinix Internet Exchange®** enables networks, content providers and large enterprises to exchange internet traffic through the largest global peering solution. Service providers can aggregate traffic to multiple counterparties, called peers, on one physical port and handle multiple small peers while moving high-traffic peers to private interconnections. This reduces latency for end users when accessing content and applications.
- **Equinix Internet Access** is an agile, scalable, resilient and high-performing internet access solution. With at least two upstream ISPs in each market, Equinix Internet Access offers the resiliency that organizations demand and direct connections to major content destinations, resulting in superior performance. It provides the convenience of a one-stop shop and the flexibility required to connect to the internet as a primary or secondary access solution. Available globally in more than 40 markets, Equinix Internet Access allows businesses to grow as their needs grow, with scalable bandwidth options to meet their emerging usage requirements.
- **Fiber Connect** provides dark fiber links between customers and partners between multiple Equinix data centers. Fiber Connect enables fast, convenient and affordable integration with partners, customers and service providers across the global Equinix digital ecosystem. It supports highly reliable, extremely low-latency communication, system integration and data exchange.

Digital Offerings

Our edge solutions help businesses rapidly deploy as a service networking, security and hardware across our global data center footprint as an alternative to buying, owning and managing the physical infrastructure. Our edge solutions are typically billed based on the number of instances and the capacity used by a customer and generate MRR.

- **Network Edge** allows customers to modernize networks within minutes, by deploying network functions virtualization ("NFV") from multiple vendors across Equinix metros. Companies can select, deploy and connect virtual network solutions at the edge quickly, with no additional hardware requirements.
- **Equinix Metal®** allows enterprises, SaaS companies and digital service providers to provision interconnected bare metal resources in minutes instead of months, while reducing the capital expenditures and operational requirements of owning hardware. They can also reduce cloud costs while retaining the flexibility and operational expenditures of cloud solutions via on-demand, reserved or spot market capacity in Equinix's global data centers using the Equinix Metal portal or DevOps-friendly APIs and integrations. DevOps, a combination of "development" and "operations", aligns collaboration between software development (Dev) and IT operations (Ops) skills and experiences to build, test and deploy APIs and other functionalities quickly.
- **Equinix Precision Time®** provides secure Precision Time Protocol ("PTP") and Network Time Protocol ("NTP") Time as a Service for distributed enterprise applications on Platform Equinix. The solution uses redundant and strategically located equipment and the high-performance network backbone of Equinix Fabric to deliver secure, reliable and precise time synchronization. Customers gain access to the product portal, allowing them to provision, manage and monitor their service.

Competition

While a large number of enterprises and service providers, such as hyperscale cloud service providers, own their own data centers, we believe the industry is shifting away from single-tenant solutions to outsourcing some or all of their IT housing and interconnection requirements to third party facilities, such as those operated by us. This shift is being accelerated by the increasing adoption of hybrid multicloud architectures.

Historically, the outsourcing market was served by large telecommunications carriers who bundled their products and services with their colocation offerings. The data center market landscape has evolved to include private and vendor-neutral MTDC providers, public and private cloud providers, managed infrastructure and application hosting providers, and systems integrators. It is estimated that Equinix is one of more than 2,200 companies that provide MTDC offerings around the world. The global MTDC market is highly fragmented. Each of these data center solutions providers can bundle various colocation, interconnection and network offerings, outsourced IT infrastructure solutions and managed services. We believe that this outsourcing trend has accelerated and is likely to continue to accelerate in the coming years, especially in light of the movement to digital business and the use of multiple cloud service providers.

Equinix is differentiated in this market by being able to offer customers a global platform that reaches over 30 countries and contains the industry’s largest and most active ecosystem of partners in our sites, including access to a leading share of cloud on-ramps, and an increasingly diverse ecosystem of networks and cloud and IT service providers. This ecosystem creates a “network effect” which improves performance and lowers cost for our customers, enabling them to become digital leaders, and is a significant source of competitive advantage for Equinix. Additionally, our digital solutions portfolio enables customers to bring together physical and programmable technologies like compute, storage, network and applications, to build a foundation for their company's digital operations.

Customers

Our customers include telecommunications carriers, mobile and other network services providers, cloud and IT services providers, digital media and content providers, financial services companies, and global enterprise ecosystems in various industries. We provide each company access to a choice of business partners and solutions based on their colocation, interconnection and managed IT service needs, and delivered 99.9999% operational uptime across our global data centers in 2022. As of December 31, 2022, we had over 10,000 customers worldwide. No one customer made up 10% or more of our total business revenues for the year ended December 31, 2022.

The following companies represent some of our leading customers and partners:

We serve our customers with a direct sales force and channel marketing program. We organize our sales force by customer type, as well as by establishing a sales presence in diverse geographic regions, which enables efficient servicing of the customer base from a network of regional offices. We also support our customers with a global customer care organization.

Human Capital

As of December 31, 2022, we had 12,097 employees worldwide with 5,493 based in the Americas, 3,936 based in EMEA and 2,668 based in Asia-Pacific. Of those employees, 5,130 employees were in engineering and operations, 1,985 employees were in sales and marketing and 4,982 employees were in management, finance and administration. As of December 31, 2022, approximately 73% of our workforce identified as men and approximately 26% identified as women. Women's representation in leadership (defined as VP and above) remained constant at 31% year-over-year.

At Equinix, we strive to build a culture where every employee, every day, can say “I’m Safe, I Belong and I Matter” and where our workforce, at all levels, reflects and represents the communities in which we operate. Our objective is to continue to make our culture a critical competitive advantage, engaging every leader and every employee in the process. To ensure we are upholding our core corporate values and making progress towards our aspirational goals, we monitor employee satisfaction through a quarterly pulse survey, which is one of our listening mechanisms. In 2022, employee satisfaction scores remained steady between 81-82 out of 100 each quarter, resulting in a score for Equinix three points higher than the benchmark score of the top 20th percentile of other companies. Managers use their quarterly pulse survey results to engage in dialogue with their teams about what is top of mind for our employees and how we can do better.

Attracting, developing and retaining talent at all levels is vital to our continued success and we offer industry competitive compensation and benefits, along with development opportunities to help every employee achieve their full potential. We continue to benefit from talent sourcing programs such as our global new-to-career programs as well as pathways programs for veterans and women returning to the workforce. In 2022, we continued to enhance our portfolio of development programs for our employees and gained full adoption of a system-enabled approach to goal setting, development planning and performance assessment to support objectivity and accountability in our talent management process. We offer development tools and opportunities to our employees such as online learning, manager training, professional coaching and 360-degree assessments for eligible employees as well as our leadership program specifically designed for high potential employees at the Director level and above.

We believe in equitable pay and equitable opportunity at every level of the organization. Equinix remains committed to attracting more women and other historically underrepresented groups to join the company, and to ensuring we have fair and consistent practices in place to recognize, reward and promote all employees, regardless of gender, ethnicity, sexual orientation, or other protected classes. Equinix operates a rigorous governance framework to manage pay and other compensation elements to ensure that all reward decisions are made fairly and without discrimination or bias. All roles are mapped and graded to one consistent global organizational framework. Each grade has a specific pay range created by benchmarking against the external market in the country in which the role is located. This global framework is also used to determine target levels for annual bonuses and long-term incentives. We strive to annually update our market data globally where information is available.

We are integrating diversity, inclusion and belonging ("DIB") into every aspect of how we run our business. In 2020, we embarked on a multi-year DIB strategy with governance through a DIB Council chaired by our CEO and CHRO, and in partnership with our Sustainability Program Office, that oversees our progress on environmental, social and governance ("ESG") matters. Our DIB strategy focuses on attracting, developing and retaining a diverse, global workforce; building leadership capability and accountability; and empowering our people to bring DIB to life. We have built multiple pathways to reach new talent from diverse communities. In 2022, we continued to forge partnerships and invest in tools and systems to grow and support our inclusive hiring practices and made updates to our recruitment marketing to reach a wider candidate pool more effectively. In 2022, our Talent Acquisition Team partnered with members of two of our Equinix Employee-led Connection Networks ("EECNs"), BlackConnect and GenteConnect, to build new avenues for recruiting Black/African American and Hispanic/Latinx talent to Equinix in the U.S. We also embedded diversity and inclusive behavior competencies in our leadership profiles and added coaching tools as well as manager training on leading inclusive teams to our development program.

Our EECNs are integral to our DIB strategy and play an important role in creating belonging and advocating for the needs and goals of communities with common identities, cultures or backgrounds. Each of our nine EECNs represents an identity/community that has faced historical discrimination or shares unique challenges. We recognize that creating the best workplace and culture we can requires a global effort with localized awareness and approaches. In 2020, we launched WeAreEquinix employee teams empowered to create, localize and promote purpose, inclusion and belonging for their locations across the world. Through live and virtual events, campaigns, and collaboration with the business, these volunteer leaders bring local opportunities to engage in the following areas: Wellbeing, Green and Sustainability, Community Impact, Fun and Creativity, DIB, and Employee Networks. We currently have WeAreEquinix teams in 35 locations.

Equinix representatives have joined the G100 Talent Consortium Task Force on Racial Inequity in Business to consider core inequity issues, including anti-racism, bias, and hiring and promotability practices, in order to develop tangible best practices that companies can use as guide rails to increase representation and career mobility for black, indigenous and people of color ("BIPOC") employees. In 2022, we hosted a Days of Understanding event as part of an initiative of CEO ACT!ON, a pledge Equinix has taken along with hundreds of other companies to embrace difference in our organizations, educate our people and build more inclusive cultures inside and outside of our workplaces. As part of this partnership, three Equinix employees completed ACT!ON's inaugural two-year fellowship program focused on identifying, developing, and promoting scalable and sustainable policies and corporate best practices that address systemic racism and social injustice to improve societal wellbeing, and two new fellows joined. Equinix also completed its first year as a member of the Alliance for Global Inclusion, a coalition of global organizations working together to bring inclusivity and full equity to the workplace. This past year, Equinix worked with the Alliance to address inclusive language, leadership representation, and STEM readiness in under-resourced communities. Finally, in 2022 Equinix continued and expanded its programs with McKinsey to provide leadership development not only to our Black/African American leaders, but also to include individuals who identify as part of the Asian and Latinx communities through the Leadership Academy.

Our Community Impact program promotes connection and belonging, and enables employees to give back, with the support of Equinix, to the communities in which we work and live. In 2022, employees volunteered 22,759 service hours and over $2 million was donated through employee giving, corporate matching funds and grants. Additionally, in 2022, The Equinix Foundation was launched with a focus on the advancement of digital inclusion—from access to technology and connectivity to the skills needed to thrive in today's digitally driven world.

We believe our commitment to the highest standards of honesty, integrity and ethical behavior differentiates our business as much as our technology. We promote these high standards through a number of policies including the Equinix Code of Business Conduct. All employees are required to complete trainings on ethics and the company's anti-bribery and corruption policies. In addition, we maintain a confidential ethics helpline where employees are encouraged to speak up if they have any questions or concerns that our code is being violated. We have a zero-tolerance, non-retaliation policy that protects our employees when they speak up.

We have continued a number of precautionary measures in line with our business continuity and pandemic plans to minimize the risk of operational impacts and to protect the health and safety of employees, customers, partners and our communities. In 2022, we took a careful approach to the opening of our offices based on guidance from health experts and other leaders from around the world. As we look forward to the future of work, and more importantly amplifying Equinix's vibrant culture, we are providing flexible, hybrid work opportunities in many roles, enhanced collaboration technologies for everyone, and activity-based workspaces at home or onsite. We recognize that the new normal will require changing behaviors. As such, we are providing learning opportunities and best practices to ensure our meetings, events and work sessions are inclusive and equitable for virtual and in-person participation. Employee well-being has been central to these efforts, driven globally through offerings such as health programs, ergonomic support, technology reimbursements, and wellness days.

We believe that all of these programs and initiatives support our human capital goals, align with our company culture, and increase employee satisfaction.

Sustainability

At Equinix, our Future First sustainability strategy rallies our people and partners to envision a better future and then do what it takes to make it happen. As the world’s digital infrastructure leader, we believe we have the responsibility to harness the power of technology to create a more accessible, equitable and sustainable future. The ESG initiatives comprising our Future First strategy focus on the issues that have the greatest impact on our stakeholders and our business. We continue to work to progress on our sustainability goals and look to build a business and world that reflects our purpose to bring the world together on our platform to create the innovations that will enrich our work, life and planet. We document our ESG progress in our Annual Report as well as in the annual Corporate Sustainability Report.

In 2021, we committed to becoming climate neutral across our global operations by 2030 and set a validated near-term science-based target (“SBT”) for emissions reduction across our global operations and supply chain. Our climate commitments are a critical step to ensure that we continue to advance investments and innovations to reduce greenhouse gas ("GHG") emissions and keep global warming to 1.5 degrees Celsius in alignment with the Paris Climate Agreement.

As a part of our Future First sustainability strategy, we published an Environmental Sustainability and Global Climate Change Policy in 2021 to detail our approach and practices related to the environment, climate change, resource efficiency and reporting. In alignment with our strategy and policy, we are also evaluating our material climate change risks and opportunities based on the recommendations of the Task Force on Climate Related Financial Disclosures (“TCFD”). In 2022, we undertook a qualitative and quantitative climate-related scenario analysis across eight climate scenarios in line with TCFD recommendations. This included scenario analysis modeling for the highest priority physical risks. We are continuing our work to embed climate change risk management into our business where relevant.

Environmental Performance

Equinix was the first data center company to commit to a long-term goal of 100% renewable energy across our global portfolio. We use local renewable energy sources where possible, seek new or recently built renewable sources and advocate for favorable renewable energy policies. In the U.S., we purchase nearly 2.5 million megawatt-hours ("MWh") of green power annually from a portfolio of renewable energy projects, including 225 MW of wind power under long-term virtual power purchase agreements ("VPPAs") located in Texas and Oklahoma. We have also recently executed 3 VPPAs in Europe which will bring 129 MW of new wind capacity to Finland when the projects are operational in 2024, 2025 and 2026. In 2021, 95% of our global electricity consumption, and 100% of U.S. electricity consumption, was covered by renewable energy sources.

We are committed to transparently measuring and reporting our global carbon footprint across direct (Scope 1), indirect energy (Scope 2) and indirect value chain (Scope 3) emissions. Since 2019, we have achieved a 12% reduction in GHG emissions on an absolute basis (Scope 1 and Scope 2 market-based metric tons of carbon dioxide-equivalent (mtCO2e)), even as the company doubled its footprint in both energy consumption and number of sites. In 2022, CDP, a global non-governmental organization dedicated to helping investors and companies measure and manage their climate risks, recognized our commitments, actions and progress on climate change.

We received an 'A' CDP leadership score for climate action and annual disclosures within the CDP Climate Change survey.

We are leveraging technology and innovation to encourage commercialization of solutions that will enable the “Data Center of the Future”. To support our ongoing sustainability initiatives and commitment to innovation, we issued green bonds approximating $3.7 billion from 2020 to 2021, with an additional $1.2 billion in 2022. Our Green Finance Framework aligns our sustainability commitments with our long-term financing needs and highlights our pipeline of green projects and data center innovations. As of December 31, 2022, we have allocated $3.7 billion in net proceeds to finance or refinance, in whole or in part, ongoing and new projects in categories of green buildings, renewable energy and energy efficiency.

We are committed to advancing environmental progress across other areas of our operations. While energy usage, specifically electricity, is our largest environmental impact, to address the growing importance of water within our operations, we launched a Sustainable Water Management Program in 2021. This program drove the implementation of tools to aid in the tracking of water usage at our data centers, helping create a 2021 baseline of our Water Usage Effectiveness (WUE) to inform future actions. We consider the consumption of water in the design and operation of our facilities and are developing a coordinated global approach to water measurement and management. Through our efforts to establish the European Climate-Neutral Data Centre Operator Pact in 2021, Equinix and the EU data center industry have also committed to advancing initiatives beyond renewable energy and energy efficiency, including water efficiency, waste reduction, and circular economy principles.

Sustainability Accounting Standards Board ("SASB") Disclosures

SASB published the Sustainability Accounting Standard ("Standard") for the Real Estate Industry in October 2018. We have aligned our SASB disclosures with the Real Estate Standard to enhance corporate disclosure around ESG performance. In our comprehensive disclosures in our annual Corporate Sustainability Report, we also document our progress against metrics as outlined in other frameworks such as the Global Reporting Initiative ("GRI"), UN Sustainable Development Goals ("SDGs") and TCFD. The following tables detail our energy metrics, aligned with the SASB Real Estate Standard. We intend to expand our reporting around the Real Estate Standard in the coming years.

The following metrics represent our colocation facilities performance in the calendar years specified. Energy, renewable energy and GHG emissions are independently assured to ISO 14064-3:2006 Standards for the quantification and reporting of GHG emissions (Scope 1, 2 and 3). Calendar year data for 2022 will become available in Q2 2023 and will be published in our annual Corporate Sustainability Report.

Energy Management: Energy Consumption

Year	Energy Consumption Data as a % of Floor Area	Total Energy Consumed by Portfolio Area with Data Coverage (MWh) (1)	Like-for-Like Change in Energy Consumption of Portfolio Area with Data Coverage (MWh) (2)	Grid Electricity Consumption as a % of Energy Consumption	Energy Consumption from Renewable Sources (MWh) (3)	Renewable Energy as a % of Energy Consumption (4)	Like-for-Like Change in Energy Consumption from Renewable Sources of Portfolio Area with Data Coverage (MWh) (2) (3)	Renewable Energy as a % of Electricity Consumption
2020(5)(6)	95.8%	6,432,000	6.2%	93.2%	5,695,000	89%	5.3%	91%
2021(7)(8)	98.0%	7,130,000	23.3%	94.6%	6,689,000	94%	26.1%	95%

(1) The scope of energy includes: energy used onsite (natural gas and diesel), energy procured (purchased electricity, electric power from fuel cells under power purchase agreements, and chilled water).

(2) Like-for-like computed for stabilized asset list for the overlapping list of sites designated as stabilized in 2020 and 2021.

(3) Excludes renewable energy inherently supplied by the standard utility grid mix. Equinix buys renewable energy for the entire electricity consumption of sites including customer and overhead load. The instruments used include: Renewable Energy Certificates (RECs) from VPPAs, RECs, International RECs (I-RECs), Guarantees of Origin (GOOs) and Renewable Energy Guarantees of Origin (REGOs) from suppliers, green tariffs and bundled contracts.

(4) Equinix's global renewable energy percentage reported for RE100 and CDP was 95%, which is comprised of 6,773 GWh of renewables out of 7,136 GWh of electric power consumption. The discrepancy in the totals arises from non-IBX data center sites' energy usage and non-electric power energy consumption.

(5) Recently constructed or acquired sites for which no utility data is available are excluded from the 2020 SASB metrics reporting boundary. These include certain data centers in the Americas (DC21) and EMEA (MC1). Reseller sites are also excluded in the energy metrics (OS99, SH1).
(6) 2020 portfolio coverage excludes xScale™ sites: LD10x, LD13x, FR11x, SP5x, PA8x.
(7) Recently constructed or acquired sites for which no utility data is available are excluded from the 2021 SASB metrics reporting boundary. These include certain data centers in EMEA (FR9x) and Asia-Pacific (OS2x, OS3, PE3) and Equinix's GPX (India) acquisition sites (MB1, MB2). Reseller sites are also excluded in both the gross floor area and the energy metrics (DA99, OS99, SH1).
(8) 2021 portfolio coverage includes xScale™ sites: LD11x, LD13x, PA8x, PA9x, SP5x, TY12x.

Energy Management: Green Building Ratings

Our environmental efforts aim to deliver meaningful and measurable progress against sustainability goals that positively impact our customers, partners, investors and employees. Our data centers are designed with high operational standards and energy efficiency in mind. Our data centers are planned holistically to incorporate the needs of our communities and we aim to minimize the use of all resources in our operations. We evaluate cost-efficient opportunities to enhance energy efficiency and buy renewable energy for existing or acquired sites.

We are working to protect our planet's resources by pioneering green data center innovations and building and operating energy-efficient data centers around the world. Our Energy Efficiency Center of Excellence is driving a global approach to cooling our existing data centers more efficiently. The program engages customers to manage their implementations more sustainably at our facilities, leading to overall improved site efficiencies.

We certify our data centers to numerous green buildings and energy management certifications and schemes. These include USGBC LEED green buildings certifications, ISO 14001:2015 Environmental Management Standard, ISO 50001:2011 Energy Management Standard, BCA Green Mark, U.S. EPA Energy Star for Data Centers and others. In 2021, Equinix became a U.S. Green Building Council (USGBC) Gold member, aligning with the developer of the LEED rating system and furthering our commitment to green buildings. To increase the scalability of certification within our portfolio, we developed a global LEED Scorecard that will help us ensure every new build is prioritizing the design and community guidelines developed by USGBC.

Data centers receiving green building ratings in 2021 and 2022 covered 1.6 million gross sq. ft. While we have additional certifications that are pending final submissions, the following new sites received ratings in 2021 or 2022:

Data Center	Metro Area	Rating Scheme	Level Achieved
		2021	
DA11	Dallas, Texas	LEED	Silver
ME2	Melbourne, Australia	LEED	Gold
SG4	Singapore	BCA Green Mark	GoldPlus
SV11	Silicon Valley, California	LEED	Gold
TY12x	Tokyo, Japan	LEED	Silver
		2022	
GN1	Genoa, Italy	LEED	Gold
OS2x	Osaka, Japan	LEED	Certified
OS3	Osaka, Japan	LEED	Silver
SG5	Singapore	BCA Green Mark LEED	Platinum Silver

In 2022, we had 19.1 million gross sq. ft., or 71% of our global footprint, in operation with green buildings and energy management certifications. Within the U.S., we had 4.0 million gross sq. ft., or 45% of our footprint, under certification, including 0.6 million of gross sq. ft., or 7% of U.S. footprint, having achieved U.S. EPA Energy Star for Data Centers. We are currently evaluating enrolling additional sites in the Energy Star program. We disclose these and other site-level details about our data centers on our sustainability website.

Year	Total Gross sq. ft. (million)(1)	Area of Eligible Portfolio with Green Building Rating (million sq. ft.)(2)	Eligible Portfolio with Green Building Rating (%)
Global Total through 2022	27.0	19.1	71%
U.S. Total through 2022	8.9	4.0 0.6 (Energy Star)	45% 7% (Energy Star)

(1) Ratings included in our totals: ISO 50001 Energy Management, ISO 14001 Environmental Management, LEED green buildings certifications, U.S. Environmental Protection Agency Energy Star for Data Centers, BCA Green Mark, NABERS and Green Globes.

(2) We are currently evaluating our approach to U.S. EPA Energy Star for Data Centers. In 2021, three sites received Energy Star for Data Centers recognition, representing 7% of our U.S. portfolio. In contrast, our U.S. portfolio has 19 LEED-certified data centers or 34% of the U.S. portfolio by gross square footage.

Our Business Segment Financial Information

We currently operate in three reportable segments comprised of our Americas, EMEA and Asia-Pacific geographic regions. Information attributable to each of our reportable segments is set forth in Note 17 within the Consolidated Financial Statements.

Available Information

Equinix owns and maintains intellectual property in the form of trademarks, patents, application programming interfaces, customer portals and a variety of products and other offerings.

We were incorporated in Delaware in June 1998. We are required to file reports under the Securities Exchange Act of 1934, as amended, with the Securities and Exchange Commission ("SEC"). The SEC maintains an internet website at http://www.sec.gov that contains reports, proxy and information statements and other information.

You may also obtain copies of our annual reports on Form 10-K, our quarterly reports on Form 10-Q and our current reports on Form 8-K, and any amendments to such reports, free of charge by visiting the Investor Relations page on our website, www.equinix.com. These reports are available as soon as reasonably practical after we file them with the SEC. Information contained on or accessible through our website is not part of this Annual Report on Form 10-K.

ITEM 1A. Risk Factors

In addition to the other information contained in this report, the following risk factors should be considered carefully in evaluating our business:

Risk Factors

<u>Risks Related to the Macro Environment</u>

Inflation in the global economy, increased interest rates and adverse global economic conditions, like the ones we are currently experiencing, could negatively affect our business and financial condition.

Inflation in the United States, Europe and other geographies has risen to levels not experienced in recent decades and we are seeing its impact on various aspects of our business. We are also experiencing an increase in our costs to procure power and supply chain issues globally. Rising prices for materials related to our IBX data center construction and our data center offerings, energy and gas prices, as well as rising wages and benefits costs negatively impact our business by increasing our operating costs. The levels of inflation we are currently experiencing may cause a decrease in sales as some customers may need to take cost cutting measures or scale back their operations. This could result in churn in our customer base, reductions in revenues from our offerings, adverse effects to our DSO, longer sales cycles, slower adoption of new technologies and increased price competition, which could adversely affect our liquidity. Customers and vendors filing for bankruptcy could also lead to costly and time-intensive actions with adverse effects, including greater difficulty or delay in accounts receivable collection. The uncertain economic environment could also have an impact on our foreign exchange forward contracts if our counterparties' credit deteriorates or if they are otherwise unable to perform their obligations. Finally, volatility in the financial markets like we are currently experiencing could affect our ability to access the capital markets at a time when we desire, or need, to do so which could have an impact on our flexibility to pursue additional expansion opportunities and maintain our desired level of revenue growth in the future.

Our efforts to mitigate the risks associated with these adverse conditions may not be successful and our business and growth could be adversely affected.

We are currently operating in a period of economic uncertainty and capital markets disruption, which has been the result of many global macro-economic factors including the ongoing military conflict between Russia and Ukraine. These macro-economic and other factors could negatively affect our business and financial condition.

The war in Ukraine has led to market disruptions, including significant volatility in commodity prices, credit and capital markets, an increase in cyber security incidents as well as supply chain disruptions.

Additionally, various of Russia’s actions have led to sanctions and other penalties being levied by the U.S., the European Union, the United Kingdom, and other countries, as well as other public and private actors and companies, against Russia and certain other geographic areas, including agreement to remove certain Russian financial institutions from the Society for Worldwide Interbank Financial Telecommunication payment system and restrictions on imports of Russian oil, liquified natural gas and coal. We do not have operations in Russia or Ukraine and historically we have had a limited number of Russian and Ukrainian customers, which we continue to screen against applicable sanctions lists per our standard processes. Although we continue to devote resources to this screening effort, including the use of software solutions, the sanctions screening process remains partially manual, and the sanctions lists continue to evolve and vary by country. We continue to address necessary changes in global sanctions laws and modify our processes as necessary in light of these evolving laws. A material failure to comply with global sanctions laws could have a negative effect on our reputation, business and financial condition.

In addition to compliance with applicable sanctions laws, we are currently limiting the ability of Russian customers to place orders for our offerings unless, after reviewing these orders, we believe they are aligned with our stated objectives in support of Ukraine. We have suspended all activities and purchasing with and through Russian partners and suppliers and have committed to not make any direct or indirect investment in Russia absent an end to this conflict. In addition, for our customers located in Ukraine, we are currently providing offerings free of charge and may continue to do so in the future.

The associated disruptions in the oil and gas markets have caused, and could continue to cause, significant increases in energy prices, which could have a material effect on our business. Additional potential sanctions and penalties have also been proposed and/or threatened. Some of our IBX data centers in EMEA partially rely on energy produced in-part from fossil fuels originating from Russia, which Russia has reduced. If Russia further reduces or turns off energy supplies to Europe, our EMEA operations could be adversely affected. Russian military actions and the resulting sanctions could further affect the global economy and financial markets and lead to instability and lack of liquidity in capital markets, potentially making it more difficult for us to obtain additional debt or equity financing on attractive terms in the future.

Prolonged unfavorable economic conditions or uncertainty as a result of the military conflict between Russia and Ukraine may adversely affect our business, financial condition, and results of operations. Any of the foregoing may also magnify the impact of other risks described in this Annual Report on Form 10-K.

Our business could be harmed by increased costs to procure power, prolonged power outages, shortages or capacity constraints as well as restrictions on access to power.

Any power outages, shortages, capacity constraints or significant increases in the cost of power may have an adverse effect on our business and our results of operations.

In each of our markets, we rely on third parties, third party infrastructure, governments, and global suppliers to provide a sufficient amount of power to maintain our IBX data centers and meet the needs of our current and future customers. Any limitation on the delivered energy supply could limit our ability to operate our IBX data centers. These limitations could have a negative impact on a given IBX data center(s) or limit our ability to grow our business which could negatively affect our financial performance and results of operations.

Our IBX data centers are affected by problems accessing electricity sources, such as planned or unplanned power outages and limitations on transmission or distribution of power. Unplanned power outages, including, but not limited to those relating to large storms, earthquakes, fires, tsunamis, cyberattacks, war, and any failures of electrical power grids more generally, and planned power outages by public utilities, such as those related to Pacific Gas and Electric Company's planned outages in California to minimize fire risks, could harm our customers and our business. Employees working from home could be subjected to planned power outages at home which could be difficult to track and could affect the day to day operations of our non-IBX data center employees. Our international operations are sometimes located outside of developed, reliable electricity markets, where we are exposed to some insecurity in supply associated with technical and regulatory problems, as well as transmission constraints. Some of our IBX data centers are located in leased buildings where, depending upon the lease requirements and number of tenants involved, we may or may not control some or all of the infrastructure including generators and fuel tanks. As a result, in the event of a power outage, we could be dependent upon the landlord, as well as the utility company, to restore the power. We attempt to limit our exposure to system downtime by using backup generators, which are in turn supported by onsite fuel storage and through contracts with fuel suppliers, but these measures may not always prevent downtime or solve for long-term or large-scale outages. Any outage or supply disruption could adversely affect our business, customer experience and revenues.

We are currently experiencing inflation and volatility pressures in the energy market globally. In particular, current dislocation in the Singapore power market has resulted in Equinix having to buy power at extremely elevated spot and future rates and this ongoing price volatility impacted elements of our 2022 financial results and long-term models. Various macroeconomic factors are contributing to the instability and global power shortage including the Russia and Ukraine war, the COVID-19 pandemic, severe weather events, governmental regulations, government relations and inflation. The price for power in many of the countries in which we operate has seen significant increases in recent months, and it is unclear when the markets will stabilize. While we have aimed to minimize our risk exposure related to power procurement in Singapore and globally via hedging, conservation, and other efficiencies, we expect the cost for power to continue to be volatile and unpredictable and subject to inflationary pressures. We believe we have made appropriate estimates for these costs in our forecasting but the current unpredictable energy market could materially affect our financial forecasting, results of operations and financial condition.

Each new facility requires access to significant quantities of electricity. Limitations on generation, transmission and distribution may limit our ability to obtain sufficient power capacity for potential expansion sites in new or existing markets. We may experience significant delays and substantial increased costs demanded by the utilities to provide the level of electrical service required by our current IBX data center designs.

Risks Related to our Operations

We experienced an information technology security breach in the past and may be vulnerable to future security breaches, which could disrupt our operations and have a material adverse effect on our business, results of operation and financial condition.

Despite our efforts to protect against cyber-attacks, we are not fully insulated from these types of security breaches, and such an attack could adversely impact our competitiveness and results of operations. For example, in September 2020, we discovered ransomware on certain of our internal systems. While the incident was resolved and did not cause a material disruption to our systems nor result in any material costs to us, we expect we will continue to face risks associated with unauthorized access to our computer systems, loss or destruction of data, computer viruses, ransomware, malware, distributed denial-of-service attacks or other malicious activities. These threats may result from human error, equipment failure, fraud or malice on the part of employees, vendors or third parties. As techniques used to breach security change frequently and are generally not recognized until launched against a target, we may not be able to promptly detect that a cyber breach has occurred, or implement security measures in a timely manner or, if and when implemented, we may not be able to determine the extent to which these measures could be circumvented. Our adaptation to a hybrid working model that includes both work from home and in an office could continue to expose us to new security risks. A party who is able to compromise the security measures on our networks or the security of our infrastructure could misappropriate either our proprietary information or the personal information of our customers or our employees, or cause interruptions or malfunctions in our operations or our customers' operations. As we provide assurances to our customers that we provide a high level of security, such a compromise could be particularly harmful to our brand and reputation. We may be required to expend significant capital and resources to protect against such threats or to alleviate problems caused by breaches in security. Any breaches that may occur in the future could expose us to increased risk of lawsuits, regulatory penalties, loss of existing or potential customers, damage relating to loss of proprietary information, harm to our reputation and increases in our security costs, which could have a material adverse effect on our financial performance and results of operations. We maintain insurance coverage for cyber risks, but such coverage may be unavailable or insufficient to cover our losses.

We offer professional solutions to our customers where we consult on data center solutions and assist with implementations. We also offer managed services in certain of our foreign jurisdictions outside of the U.S. where we manage the data center infrastructure for our customers. The access to our clients' networks and data, which is gained from these solutions, creates some risk that our clients' networks or data could be improperly accessed. We may also design our clients' cloud storage systems in such a way that exposes our clients to increased risk of data breach. If we were held responsible for any such breach, it could result in a significant loss to us, including damage to our client relationships, harm to our brand and reputation, and legal liability.

Any failure of our physical infrastructure or negative impact on our ability to meet our obligations to our customers, or damage to customer infrastructure within our IBX data centers, could lead to significant costs and disruptions that could reduce our revenue and harm our business reputation and financial condition.

Our business depends on providing customers with highly reliable solutions. We must safeguard our customers' infrastructure and equipment located in our IBX data centers and ensure our IBX data centers and non-IBX offices remain operational at all times. We own certain of our IBX data centers, but others are leased by us, and we rely on the landlord for basic maintenance of our leased IBX data centers and office buildings. If such landlord has not maintained a leased property sufficiently, we may be forced into an early exit from the center which could be disruptive to our business. Furthermore, we continue to acquire IBX data centers not built by us. If we discover that these buildings and their infrastructure assets are not in the condition we expected when they were acquired, we may be required to incur substantial additional costs to repair or upgrade the IBX data centers. Newly acquired data centers also may not have the same power infrastructure and design in place as our own IBX data centers. These legacy designs could require upgrades in order to meet our standards and our customers' expectations. Until the legacy systems are brought up to our standards, customers in these legacy IBX data centers could be exposed to higher risks of unexpected power outages. We have experienced power outages because of these legacy design issues in the past and we could experience these in the future.

Problems at one or more of our IBX data centers or corporate offices, whether or not within our control, could result in service interruptions or significant infrastructure or equipment damage. These could result from numerous factors, including but not limited to:

- human error;
- equipment failure;
- physical, electronic and cyber security breaches;
- fire, earthquake, hurricane, flood, tornado and other natural disasters;
- extreme temperatures;
- water damage;
- fiber cuts;
- power loss;
- terrorist acts;
- sabotage and vandalism;
- global pandemics such as the COVID-19 pandemic;
- inability of our operations employees to access our IBX data centers for any reason; and
- failure of business partners who provide our resale products.

We have service level commitment obligations to certain customers. As a result, service interruptions or significant equipment damage in our IBX data centers could result in difficulty maintaining service level commitments to these customers and potential claims related to such failures. Because our IBX data centers are critical to many of our customers' businesses, service interruptions or significant equipment damage in our IBX data centers could also result in lost profits or other indirect or consequential damages to our customers. We cannot guarantee that a court would enforce any contractual limitations on our liability in the event that one of our customers brings a lawsuit against us as a result of a problem at one of our IBX data centers and we may decide to reach settlements with affected customers irrespective of any such contractual limitations. Any such settlement may result in a reduction of revenue under U.S. generally accepted accounting principles ("GAAP"). In addition, any loss of service, equipment damage or inability to meet our service level commitment obligations could reduce the confidence of our customers and could consequently impair our ability to obtain and retain customers, which would adversely affect both our ability to generate revenues and our results of operations.

Furthermore, we are dependent upon internet service providers, telecommunications carriers and other website operators in the Americas, Asia-Pacific and EMEA regions and elsewhere, some of which have experienced significant system failures and electrical outages in the past. Our customers may in the future experience difficulties due to system failures unrelated to our systems and offerings. If, for any reason, these providers fail to provide the required services, our business, financial condition and results of operations could be materially and adversely impacted.

Our IBX data center employees are critical to our ability to maintain our business operations and reach our service level commitments. Although we have redundancies built into our workforce, if our IBX employees are unable to access our IBX data centers for any reason, we could experience operational issues at the affected site. Pandemics, weather and climate related crises or any other social, political, or economic disruption in the U.S. or abroad could prevent sufficient staffing at our IBX data centers and have a material adverse impact on our operations.

We are currently making significant investments in our back-office information technology systems and processes. Difficulties from or disruptions to these efforts may interrupt our normal operations and adversely affect our business and results of operations.

We have been investing heavily in our back-office information technology systems and processes for a number of years and expect such investment to continue for the foreseeable future in support of our pursuit of global, scalable solutions across all geographies and functions that we operate in. These continuing investments include: 1) ongoing improvements to the customer experience from initial quote to customer billing and our revenue recognition process; 2) integration of recently-acquired operations onto our various information technology systems; and 3) implementation of new tools and technologies to either further streamline and automate processes, or to support our compliance with evolving U.S. GAAP. Our finance team is also working on a multi-year project to move the backbone of our finance systems to the cloud. As a result of our continued work on these projects, we may experience difficulties with our systems, management distraction and significant business disruptions. For example, difficulties with our systems may interrupt our ability to accept and deliver customer orders and may adversely impact our overall financial operations, including our accounts payable, accounts receivables, general ledger, fixed assets, revenue recognition, close processes, internal financial controls and our ability to otherwise run and track our business. We may need to expend significant attention, time and resources to correct problems or find alternative sources for performing these functions. All of these changes to our financial systems also create an increased risk of deficiencies in our internal controls over financial reporting until such systems are stabilized. Such significant investments in our back-office systems may take longer to complete and cost more than originally planned. In addition, we may not realize the full benefits we hoped to achieve and there is a risk of an impairment charge if we decide that portions of these projects will not ultimately benefit us or are de-scoped. Finally, the collective impact of these changes to our business has placed significant demands on impacted employees across multiple functions, increasing the risk of errors and control deficiencies in our financial statements, distraction from the effective operation of our business and difficulty in attracting and retaining employees. Any such difficulties or disruptions may adversely affect our business and results of operations.

The level of insurance coverage that we purchase may prove to be inadequate.

We carry liability, property, business interruption and other insurance policies to cover insurable risks to our company. We select the types of insurance, the limits and the deductibles based on our specific risk profile, the cost of the insurance coverage versus its perceived benefit and general industry standards. Our insurance policies contain industry standard exclusions for events such as war and nuclear reaction. We purchase earthquake insurance for certain of our IBX data centers, but for our IBX data centers in high-risk zones, including those in California and Japan, we have elected to self-insure. The earthquake and flood insurance that we do purchase would be subject to high deductibles. Any of the limits of insurance that we purchase, including those for flood or cyber risks, could prove to be inadequate, which could materially and adversely impact our business, financial condition and results of operations.

If we are unable to implement our evolving organizational structure or if we are unable to recruit or retain key executives and qualified personnel, our business could be harmed.

In connection with the evolving needs of our customers and our business, we continue to review our organizational architecture and have made, and will continue to make, changes as appropriate, including recently announced leadership and organizational changes to our digital and data center solutions teams. We must also continue to identify, hire, train and retain key personnel who maintain relationships with our customers and who can provide the technical, strategic and marketing skills required for our company's growth. There is a shortage of qualified personnel in these fields, made more acute in the current tight labor market, and we compete with other companies for the limited pool of talent.

The failure to recruit and retain necessary key executives and personnel could cause disruption, harm our business and hamper our ability to grow our company.

The failure to obtain favorable terms when we renew our IBX data center leases, or the failure to renew such leases, could harm our business and results of operations.

While we own certain of our IBX data centers, others are leased under long-term arrangements. These leased IBX data centers have all been subject to significant development by us in order to convert them from, in most cases, vacant buildings or warehouses into IBX data centers. Most of our IBX data center leases have renewal options available to us. However, many of these renewal options provide for the rent to be set at then-prevailing market rates. To the extent that then-prevailing market rates or negotiated rates are higher than present rates, these higher costs may adversely impact our business and results of operations, or we may decide against renewing the lease. There may also be changes in shared operating costs in connection with our leases, which are commonly referred to as common area maintenance expenses. In the event that an IBX data center lease does not have a renewal option, or we fail to exercise a renewal option in a timely fashion and lose our right to renew the lease, we may not be successful in negotiating a renewal of the lease with the landlord. A failure to renew a lease or termination by a landlord of any lease could force us to exit a building prematurely, which could disrupt our business, harm our customer relationships, impact and harm our joint venture relationships, expose us to liability under our customer contracts or joint venture agreements, cause us to take impairment charges and affect our results of operations negatively.

We depend on a number of third parties to provide internet connectivity to our IBX data centers; if connectivity is interrupted or terminated, our results of operations and cash flow could be materially and adversely affected.

The presence of diverse telecommunications carriers' fiber networks in our IBX data centers is critical to our ability to retain and attract new customers. We are not a telecommunications carrier, and as such, we rely on third parties to provide our customers with carrier services. We believe that the availability of carrier capacity will directly affect our ability to achieve our projected results. We rely primarily on revenue opportunities from the telecommunications carriers' customers to encourage them to invest the capital and operating resources required to connect from their data centers to our IBX data centers. Carriers will likely evaluate the revenue opportunity of an IBX data center based on the assumption that the environment will be highly competitive. We cannot provide assurance that each and every carrier will elect to offer its services within our IBX data centers or that once a carrier has decided to provide internet connectivity to our IBX data centers that it will continue to do so for any period of time.

Our new IBX data centers require construction and operation of a sophisticated redundant fiber network. The construction required to connect multiple carrier facilities to our IBX data centers is complex and involves factors outside of our control, including regulatory processes and the availability of construction resources. Any hardware or fiber failures on this network may result in significant loss of connectivity to our new IBX data center expansions. This could affect our ability to attract new customers to these IBX data centers or retain existing customers.

To date, the network neutrality of our IBX data centers and the variety of networks available to our customers has often been a competitive advantage for us. In certain of our acquired IBX data centers in the Asia-Pacific region, the limited number of carriers available reduces that advantage. As a result, we may need to adapt our key revenue-generating offerings and pricing to be competitive in those markets.

If the establishment of highly diverse internet connectivity to our IBX data centers does not occur, is materially delayed or is discontinued, or is subject to failure, our results of operations and financial condition will be adversely affected.

The use of high power density equipment may limit our ability to fully utilize our older IBX data centers.

Server technologies continue to evolve and in some instances these changes can result in customers increasing their use of high power density equipment in our IBX data centers which can increase the demand for power on a per cabinet basis. Because many of our IBX data centers were built a number of years ago, the current demand for power may exceed the designed electrical capacity in these IBX data centers. As power, not space, is a limiting factor in many of our IBX data centers, our ability to fully utilize those IBX data centers may be impacted. The ability to increase the power capacity of an IBX data center, should we decide to, is dependent on several factors including, but not limited to, the local utility's ability to provide additional power; the length of time required to provide such power; and/or whether it is feasible to upgrade the electrical infrastructure of an IBX data center to deliver additional power to customers. Although we are currently designing and building to a higher power specification than that of many of our older IBX data centers, there is a risk that demand will continue to increase and our IBX data centers could become underutilized sooner than expected.

Our offerings have a long sales cycle that may harm our revenue and results of operations.

A customer's decision to purchase our offerings typically involves a significant commitment of resources. In addition, some customers will be reluctant to commit to locating in our IBX data centers until they are confident that the IBX data center has adequate carrier connections. As a result, we have a long sales cycle. Furthermore, we may devote significant time and resources to pursuing a particular sale or customer that does not result in revenues.

Delays due to the length of our sales cycle may materially and adversely affect our revenues and results of operations, which could harm our ability to meet our forecasts and cause volatility in our stock price.

We may not be able to compete successfully against current and future competitors.

The global multi-tenant data center market is highly fragmented. It is estimated that we are one of more than 2,200 companies that provide these offerings around the world. We compete with these firms which vary in terms of their data center offerings and the geographies in which they operate. We must continue to evolve our product strategy and be able to differentiate our IBX data centers and product offerings from those of our competitors.

Some of our competitors may adopt aggressive pricing policies, especially if they are not highly leveraged or have lower return thresholds than we do. As a result, we may suffer from pricing pressure that would adversely affect our ability to generate revenues. Some of these competitors may also provide our target customers with additional benefits, including bundled communication services or cloud services, and may do so in a manner that is more attractive to our potential customers than obtaining space in our IBX data centers. Similarly, with growing acceptance of cloud-based technologies, we are at risk of losing customers that may decide to fully leverage cloud infrastructure offerings instead of managing their own. Competitors could also operate more successfully or form alliances to acquire significant market share. Regional competitors may also consolidate to become a global competitor. Consolidation of our customers and/or our competitors may present a risk to our business model and have a negative impact on our revenues.

Failure to compete successfully may materially adversely affect our financial condition, cash flows and results of operations.

If we cannot continue to develop, acquire, market and provide new offerings or enhancements to existing offerings that meet customer requirements and differentiate us from our competitors, our results of operations could suffer.

As our customers evolve their IT strategies, we must remain flexible and evolve along with new technologies and industry and market shifts. Ineffective planning and execution in our cloud and product development strategies may cause difficulty in sustaining our competitive advantages.

The process of developing and acquiring new offerings and enhancing existing offerings is complex. If we fail to anticipate customers' evolving needs and expectations or do not adapt to technological and IT trends, our results of operations could suffer. In order to adapt effectively, we sometimes must make long-term investments, develop, acquire or obtain certain intellectual property and commit significant resources before knowing whether our predictions will accurately reflect customer demand for the new offerings. Additionally, any delay in the development, acquisition, marketing or launch of a new offering could result in customer dissatisfaction or attrition. If we cannot continue adapting our products, or if our competitors can adapt their products more quickly than us, our business could be harmed.

We have invested in joint ventures in order to develop capacity to serve the large footprint needs of a targeted set of hyperscale customers by leveraging existing capacity and dedicated hyperscale builds. We have announced our intention to seek additional joint ventures for certain of our hyperscale builds. There can be no assurances that our joint ventures will be successful or that we find appropriate partners, or that we will be able to successfully meet the needs of these customers.

In 2020, we acquired Packet Host, Inc. ("Packet"), a bare metal automation company to facilitate a new hardware product offering for us. We expect to continue to consider other new product offerings for our customers. Hardware solutions are a relatively new market area for us which can bring challenges and could harm our business if not executed in the time or manner that we expect. Hardware solutions can also require additional capital and may have lower margins than our data center offerings, thus adversely impacting our results. While we believe this product offering and others we may implement in the future will be desirable to our customers and will complement our other offerings on Platform Equinix, we cannot guarantee the success of this product or any other new product offering.

Failure to successfully execute on our product strategy could materially adversely affect our financial condition, cash flows and results of operations.

We have government customers, which subjects us to risks including early termination, audits, investigations, sanctions and penalties.

We derive revenues from contracts with the U.S. government, state and local governments and foreign governments. Some of these customers may terminate all or part of their contracts at any time, without cause. There is increased pressure for governments and their agencies, both domestically and internationally, to reduce spending. Some of our federal government contracts are subject to the approval of appropriations being made by the U.S. Congress to fund the expenditures under these contracts. Similarly, some of our contracts at the state and local levels are subject to government funding authorizations.

Government contracts often have unique terms and conditions, such as most favored customer obligations, and are generally subject to audits and investigations which could result in various civil and criminal penalties and administrative sanctions, including termination of contracts, refund of a portion of fees received, forfeiture of profits, suspension of payments, fines and suspensions or debarment from future government business.

Because we depend on the development and growth of a balanced customer base, including key magnet customers, failure to attract, grow and retain this base of customers could harm our business and results of operations.

Our ability to maximize revenues depends on our ability to develop and grow a balanced customer base, consisting of a variety of companies, including enterprises, cloud, digital content and financial companies, and network service providers. We consider certain of these customers to be key magnets in that they draw in other customers. The more balanced the customer base within each IBX data center, the better we will be able to generate significant interconnection revenues, which in turn increases our overall revenues. Our ability to attract customers to our IBX data centers will depend on a variety of factors, including the presence of multiple carriers, the mix of our offerings, the overall mix of customers, the presence of key customers attracting business through vertical market ecosystems, the IBX data center's operating reliability and security and our ability to effectively market our offerings. However, some of our customers may face competitive pressures and may ultimately not be successful or may be consolidated through merger or acquisition. If these customers do not continue to use our IBX data centers it may be disruptive to our business. If customers combine businesses, they may require less colocation space, which could lead to churn in our customer base. Finally, any uncertain global economic climate, including the one we are currently experiencing, could harm our ability to attract and retain customers if customers slow spending, or delay decision-making on our offerings, or if customers begin to have difficulty paying us or seek bankruptcy protection and we experience increased churn in our customer base. Any of these factors may hinder the development, growth and retention of a balanced customer base and adversely affect our business, financial condition and results of operations.

Risks Related to our Financial Results

Our results of operations may fluctuate.

We have experienced fluctuations in our results of operations on a quarterly and annual basis. The fluctuations in our results of operations may cause the market price of our common stock to be volatile. We may experience significant fluctuations in our results of operations in the foreseeable future due to a variety of factors, many of which are listed in the Risk Factors section. Additional factors could include, but are not limited to:

- the timing and magnitude of depreciation and interest expense or other expenses related to the acquisition, purchase or construction of additional IBX data centers or the upgrade of existing IBX data centers;
- demand for space, power and solutions at our IBX data centers;
- changes in general economic conditions, such as those stemming from pandemics or other economic downturns, or specific market conditions in the telecommunications and internet industries, any of which could have a material impact on us or on our customer base;
- additions and changes in product offerings and our ability to ramp up and integrate new products within the time period we have forecasted;
- restructuring charges or reversals of restructuring charges, which may be necessary due to revised sublease assumptions, changes in strategy or otherwise;
- the financial condition and credit risk of our customers;

- the provision of customer discounts and credits;
- the mix of current and proposed products and offerings and the gross margins associated with our products and offerings;
- increasing repair and maintenance expenses in connection with aging IBX data centers;
- lack of available capacity in our existing IBX data centers to generate new revenue or delays in opening new or acquired IBX data centers that delay our ability to generate new revenue in markets which have otherwise reached capacity;
- changes in employee stock-based compensation;
- changes in our tax planning strategies or failure to realize anticipated benefits from such strategies;
- changes in income tax benefit or expense; and
- changes in or new GAAP as periodically released by the Financial Accounting Standards Board ("FASB").

Any of the foregoing factors, or other factors discussed elsewhere in this report, could have a material adverse effect on our business, results of operations and financial condition. Although we have experienced growth in revenues in recent quarters, this growth rate is not necessarily indicative of future results of operations. It is possible that we may not be able to generate net income on a quarterly or annual basis in the future. In addition, a relatively large portion of our expenses are fixed in the short-term, particularly with respect to lease and personnel expenses, depreciation and amortization and interest expenses. Therefore, our results of operations are particularly sensitive to fluctuations in revenues. As such, comparisons to prior reporting periods should not be relied upon as indications of our future performance. In addition, our results of operations in one or more future quarters may fail to meet the expectations of securities analysts or investors.

We may incur goodwill and other intangible asset impairment charges, or impairment charges to our property, plant and equipment, which could result in a significant reduction to our earnings.

In accordance with U.S. GAAP, we are required to assess our goodwill and other intangible assets annually, or more frequently whenever events or changes in circumstances indicate potential impairment, such as changing market conditions or any changes in key assumptions. If the testing performed indicates that an asset may not be recoverable, we are required to record a non-cash impairment charge for the difference between the carrying value of the goodwill or other intangible assets and the implied fair value of the goodwill or other intangible assets in the period the determination is made.

We also periodically monitor the remaining net book values of our property, plant and equipment, including at the individual IBX data center level. Although each individual IBX data center is currently performing in accordance with our expectations, the possibility that one or more IBX data centers could begin to under-perform relative to our expectations is possible and may also result in non-cash impairment charges.

These charges could be significant, which could have a material adverse effect on our business, results of operations or financial condition.

We have incurred substantial losses in the past and may incur additional losses in the future.

As of December 31, 2022, our retained earnings were $3.0 billion. We are currently investing heavily in our future growth through the build out of multiple additional IBX data centers, expansions of IBX data centers and acquisitions of complementary businesses. As a result, we will incur higher depreciation and other operating expenses, as well as transaction costs and interest expense, that may negatively impact our ability to sustain profitability in future periods unless and until these new IBX data centers generate enough revenue to exceed their operating costs and cover the additional overhead needed to scale our business for this anticipated growth. The current global financial uncertainty may also impact our ability to sustain profitability if we cannot generate sufficient revenue to offset the increased costs of our recently-opened IBX data centers or IBX data centers currently under construction. In addition, costs associated with the acquisition and integration of any acquired companies, as well as the additional interest expense associated with debt financing, we have undertaken to fund our growth initiatives, may also negatively impact our ability to sustain profitability. Finally, given the competitive and evolving nature of the industry in which we operate, we may not be able to sustain or increase profitability on a quarterly or annual basis.

Risks Related to Our Expansion Plans

Our construction of new IBX data centers or IBX data center expansions could involve significant risks to our business.

In order to sustain our growth in certain of our existing and new markets, we may have to expand an existing data center, lease a new facility or acquire suitable land, with or without structures, to build new IBX data centers from the ground up. Expansions or new builds are currently underway, or being contemplated, in many of our markets. These construction projects expose us to many risks which could have an adverse effect on our results of operations and financial condition. The current global supply chain and inflation issues have exacerbated many of these construction risks and created additional risks for our business. Some of the risks associated with construction projects include:

- construction delays;
- lack of availability and delays for data center equipment, including items such as generators and switchgear;
- unexpected budget changes;
- increased prices for and delays in obtaining building supplies, raw materials and data center equipment;
- labor availability, labor disputes and work stoppages with contractors, subcontractors and other third parties, including interruptions in work due to the COVID-19 pandemic;
- unanticipated environmental issues and geological problems;
- delays related to permitting and approvals to open from public agencies and utility companies;
- unexpected lack of power access;
- power and power grid constraints;
- delays in site readiness leading to our failure to meet commitments made to customers planning to expand into a new build; and
- unanticipated customer requirements that would necessitate alternative data center design, making our sites less desirable or leading to increased costs in order to make necessary modifications or retrofits.

We are currently experiencing rising construction costs which reflect the increase in cost of labor and raw materials, supply chain and logistic challenges, and high demand in our sector. While we have invested in creating a reserve of materials to mitigate supply chain issues and inflation, it may not be sufficient and ongoing delays, difficulty finding replacement products and continued high inflation could affect our business and growth and could have a material effect on our business. Additional or unexpected disruptions to our supply chain or inflationary pressures could significantly affect the cost of our planned expansion projects and interfere with our ability to meet commitments to customers who have contracted for space in new IBX data centers under construction.

Construction projects are dependent on permitting from public agencies and utility companies. Any delay in permitting could affect our growth. We are currently experiencing permitting delays in most metros due to reduced production from labor availability and from other COVID-19 pandemic related permitting restrictions or stoppages. While we don't currently anticipate any material long-term negative impact to our business because of these construction delays, these types of delays and stoppages related to permitting from public agencies and utility companies could worsen and have an adverse effect on our bookings, revenue or growth.

Additionally, all construction related projects require us to carefully select and rely on the experience of one or more designers, general contractors, and associated subcontractors during the design and construction process. Should a designer, general contractor, significant subcontractor or key supplier experience financial problems or other problems during the design or construction process, we could experience significant delays, increased costs to complete the project and/or other negative impacts to our expected returns.

Site selection is also a critical factor in our expansion plans. There may not be suitable properties available in our markets with the necessary combination of high-power capacity and fiber connectivity, or selection may be limited. We expect that we will continue to experience limited availability of power and grid constraints in many markets as well as shortages of associated equipment because of the current high demands and finite nature of these resources. These shortages could result in site selection challenges, construction delays or increased costs. Thus, while we may prefer to locate new IBX data centers adjacent to our existing locations, it may not always be possible. In the event we decide to build new IBX data centers separate from our existing IBX data centers, we may provide metro connect solutions to connect these two IBX data centers. Should these solutions not provide the necessary reliability to sustain connection, or if they do not meet the needs of our customers, this could result in lower interconnection revenue and lower margins and could have a negative impact on customer retention over time.

Acquisitions present many risks, and we may not realize the financial or strategic goals that were contemplated at the time of any transaction.

Over the last several years, we have completed numerous acquisitions, including most recently that of five data centers in Peru and Chile from Entel in 2022, MainOne in West Africa in 2022, and GPX Global System's, Inc.'s India operations in 2021. We expect to make additional acquisitions in the future, which may include (i) acquisitions of businesses, products, solutions or technologies that we believe to be complementary, (ii) acquisitions of new IBX data centers or real estate for development of new IBX data centers; (iii) acquisitions through investments in local data center operators; or (iv) acquisitions in new markets with higher risk profiles. We may pay for future acquisitions by using our existing cash resources (which may limit other potential uses of our cash), incurring additional debt (which may increase our interest expense, leverage and debt service requirements) and/or issuing shares (which may dilute our existing stockholders and have a negative effect on our earnings per share). Acquisitions expose us to potential risks, including:

- the possible disruption of our ongoing business and diversion of management's attention by acquisition, transition and integration activities, particularly when multiple acquisitions and integrations are occurring at the same time or when we are entering an emerging market with a higher risk profile;
- our potential inability to successfully pursue or realize some or all of the anticipated revenue opportunities associated with an acquisition or investment;
- the possibility that we may not be able to successfully integrate acquired businesses, or businesses in which we invest, or achieve anticipated operating efficiencies or cost savings;
- the possibility that announced acquisitions may not be completed, due to failure to satisfy the conditions to closing as a result of:
    - an injunction, law or order that makes unlawful the consummation of the acquisition;
    - inaccuracy or breach of the representations and warranties of, or the non-compliance with covenants by, either party;
    - the nonreceipt of closing documents; or
    - for other reasons;
- the possibility that there could be a delay in the completion of an acquisition, which could, among other things, result in additional transaction costs, loss of revenue or other adverse effects resulting from such uncertainty;
- the possibility that our projections about the success of an acquisition could be inaccurate and any such inaccuracies could have a material adverse effect on our financial projections;
- the dilution of our existing stockholders as a result of our issuing stock as consideration in a transaction or selling stock in order to fund the transaction;
- the possibility of customer dissatisfaction if we are unable to achieve levels of quality and stability on par with past practices;
- the possibility that we will be unable to retain relationships with key customers, landlords and/or suppliers of the acquired businesses, some of which may terminate their contracts with the acquired business as a result of the acquisition or which may attempt to negotiate changes in their current or future business relationships with us;
- the possibility that we could lose key employees from the acquired businesses;
- the possibility that we may be unable to integrate certain IT systems that do not meet Equinix's standard requirements with respect to security, privacy or any other standard;
- the potential deterioration in our ability to access credit markets due to increased leverage;
- the possibility that our customers may not accept either the existing equipment infrastructure or the "look-and-feel" of a new or different IBX data center;

- the possibility that additional capital expenditures may be required or that transaction expenses associated with acquisitions may be higher than anticipated;
- the possibility that required financing to fund an acquisition may not be available on acceptable terms or at all;
- the possibility that we may be unable to obtain required approvals from governmental authorities under antitrust and competition laws on a timely basis or at all, which could, among other things, delay or prevent us from completing an acquisition, limit our ability to realize the expected financial or strategic benefits of an acquisition or have other adverse effects on our current business and operations;
- the possible loss or reduction in value of acquired businesses;
- the possibility that future acquisitions may present new complexities in deal structure, related complex accounting and coordination with new partners, particularly in light of our desire to maintain our qualification for taxation as a REIT;
- the possibility that we may not be able to prepare and issue our financial statements and other public filings in a timely and accurate manner, and/or maintain an effective control environment, due to the strain on the finance organization when multiple acquisitions and integrations are occurring at the same time;
- the possibility that future acquisitions may trigger property tax reassessments resulting in a substantial increase to our property taxes beyond that which we anticipated;
- the possibility that future acquisitions may be in geographies and regulatory environments to which we are unaccustomed and we may become subject to complex requirements and risks with which we have limited experience;
- the possibility that future acquisitions may appear less attractive due to fluctuations in foreign currency rates;
- the possibility that carriers may find it cost-prohibitive or impractical to bring fiber and networks into a new IBX data center;
- the possibility of litigation or other claims in connection with, or as a result of, an acquisition, including claims from terminated employees, customers, former stockholders or other third parties;
- the possibility that asset divestments may be required in order to obtain regulatory clearance for a transaction;
- the possibility of pre-existing undisclosed liabilities, including, but not limited to, lease or landlord related liability, tax liability, environmental liability or asbestos liability, for which insurance coverage may be insufficient or unavailable, or other issues not discovered in the diligence process;
- the possibility that we receive limited or incorrect information about the acquired business in the diligence process; and
- the possibility that we do not have full visibility into customer agreements and customer termination rights during the diligence process which could expose us to additional liabilities after completing the acquisition.

The occurrence of any of these risks could have a material adverse effect on our business, results of operations, financial condition or cash flows. If an acquisition does not proceed or is materially delayed for any reason, the price of our common stock may be adversely impacted, and we will not recognize the anticipated benefits of the acquisition.

We cannot assure that the price of any future acquisitions of IBX data centers will be similar to prior IBX data center acquisitions. In fact, we expect costs required to build or render new IBX data centers operational to increase in the future. If our revenue does not keep pace with these potential acquisition and expansion costs, we may not be able to maintain our current or expected margins as we absorb these additional expenses. There is no assurance we would successfully overcome these risks, or any other problems encountered with these acquisitions.

The anticipated benefits of our joint ventures may not be fully realized, or take longer to realize than expected.

We have entered into joint ventures to develop and operate xScale™ data centers (together, the “Joint Ventures”). Equinix owns a 20% interest and our JV partners own an 80% interest in each joint venture, and Equinix operates all facilities.

Certain sites that are intended to be utilized in Joint Ventures require investment for development. The success of these Joint Ventures will depend, in part, on the successful development of the data center sites, and we may not realize all of the anticipated benefits. Such development may be more difficult, time-consuming or costly than expected and could result in increased costs, decreases in the amount of expected revenues and diversion of management's time and energy, which could materially impact our business, financial condition and results of operations. Additionally, if it is determined these sites are no longer desirable for the Joint Ventures, we would need to adapt such sites for other purposes.

We may not realize all of the anticipated benefits from our Joint Ventures. The success of these Joint Ventures will depend, in part, on the successful partnership between Equinix and our JV partners. Such a partnership is subject to risks as outlined below in our risk factor related to Joint Ventures, and more generally, to the same types of business risks as would impact our IBX data center business. A failure to successfully partner, or a failure to realize our expectations for the Joint Ventures, including any contemplated exit strategy from a Joint Venture, could materially impact our business, financial condition and results of operations. These Joint Ventures could also be negatively impacted by inflation, supply chain issues, an inability to obtain financing on favorable terms or at all, an inability to fill the xScale sites with customers as planned, and development and construction delays, including those we are currently experiencing in many markets globally.

Joint venture investments could expose us to risks and liabilities in connection with the formation of the new joint ventures, the operation of such joint ventures without sole decision-making authority, and our reliance on joint venture partners who may have economic and business interests that are inconsistent with our business interests.

In addition to our current and proposed Joint Ventures, we may co-invest with other third parties through partnerships, joint ventures or other entities in the future. These joint ventures could result in our acquisition of non-controlling interests in, or shared responsibility for, managing the affairs of a property or portfolio of properties, partnership, joint venture or other entity. We may be subject to additional risks, including:

- we may not have the right to exercise sole decision-making authority regarding the properties, partnership, joint venture or other entity;
- if our partners become bankrupt or fail to fund their share of required capital contributions, we may choose to or be required to contribute such capital;
- our partners may have economic, tax or other business interests or goals which are inconsistent with our business interests or goals, and may be in a position to take actions contrary to our policies or objectives;
- our joint venture partners may take actions that are not within our control, which could require us to dispose of the joint venture asset, transfer it to a taxable REIT subsidiary ("TRS") in order to maintain our qualification for taxation as a REIT, or purchase the partner's interests or assets at an above-market price;
- our joint venture partners may take actions unrelated to our business agreement but which reflect poorly on us because of our joint venture;
- disputes between us and our partners may result in litigation or arbitration that would increase our expenses and prevent our management from focusing their time and effort on our day-to-day business;
- we may in certain circumstances be liable for the actions of our third-party partners or guarantee all or a portion of the joint venture's liabilities, which may require us to pay an amount greater than its investment in the joint venture; and
- a joint venture partner's decision to exit the joint venture may not be at an opportune time for us or in our business interests.

Each of these factors may result in returns on these investments being less than we expect or in losses, and our financial and results of operations may be adversely affected.

If we cannot effectively manage our international operations, and successfully implement our international expansion plans, or comply with evolving laws and regulations, our revenues may not increase, and our business and results of operations would be harmed.

For the years ended December 31, 2022, 2021 and 2020, we recognized approximately 61%, 61% and 59%, respectively, of our revenues outside the U.S. We currently operate outside of the U.S. in Canada, Mexico, South America, the Asia-Pacific region and, the EMEA region.

In addition, we are currently undergoing expansions or evaluating expansion opportunities outside of the U.S. Undertaking and managing expansions in foreign jurisdictions may present unanticipated challenges to us.

Our international operations are generally subject to a number of additional risks, including:

- the costs of customizing IBX data centers for foreign countries;
- protectionist laws and business practices favoring local competition;
- greater difficulty or delay in accounts receivable collection;
- difficulties in staffing and managing foreign operations, including negotiating with foreign labor unions or workers' councils;
- difficulties in managing across cultures and in foreign languages;
- political and economic instability;
- fluctuations in currency exchange rates;
- difficulties in repatriating funds from certain countries;
- our ability to obtain, transfer or maintain licenses required by governmental entities with respect to our business;
- unexpected changes in regulatory, tax and political environments such as the United Kingdom's withdrawal from the European Union ("Brexit"), the Hong Kong national security law, and the current trade war between the U.S. and China;
- our ability to secure and maintain the necessary physical and telecommunications infrastructure;
- compliance with anti-bribery and corruption laws;
- compliance with economic and trade sanctions enforced by the Office of Foreign Assets Control of the U.S. Department of Treasury and other enforcement agencies in other jurisdictions around the world including those related to the Russian and Ukrainian war;
- compliance with changing laws, policies and requirements related to sustainability;
- compliance with evolving governmental regulation with which we have little experience; and
- compliance with evolving and varied regulations related to the ongoing COVID-19 pandemic.

Geo-political events, such as the COVID-19 pandemic, Brexit, the Hong Kong national security law, the trade war between the U.S. and China and the war between Russia and Ukraine, may increase the likelihood of the listed risks to occur and could have a negative effect on our business domestically or internationally. With respect to Brexit, it is possible that the level of economic activity in the United Kingdom and the rest of Europe will be adversely impacted and that we will face increased regulatory and legal complexities in these regions which could have an adverse impact on our business and employees in EMEA and could adversely affect our financial condition and results of operations. In addition, compliance with international and U.S. laws and regulations that apply to our international operations increases our cost of doing business in foreign jurisdictions. These laws and regulations include the General Data Protection Regulation ("GDPR") and other data privacy laws and requirements, labor relations laws, tax laws, anti-competition regulations, import and trade restrictions, export requirements, economic and trade sanctions, U.S. laws such as the Foreign Corrupt Practices Act and local laws which also prohibit corrupt payments to governmental officials. With respect to the current trade war between the U.S. and China, we have several customers in China named in restrictive executive orders by the previous U.S. administration that are currently covered by a freeze issued by the current U.S. administration or currently enjoined from enforcement subject to pending litigation. If Equinix is required to cease business with these companies, or additional companies in the future, our revenues could be adversely affected. Violations of any of these domestic or international laws and regulations could result in fines, criminal sanctions against us, our officers or our employees, and prohibitions on the conduct of our business. Any such violations could include prohibitions on our ability to provide our offerings in one or more countries, could delay or prevent potential acquisitions, and could also materially damage our reputation, our brand, our international expansion efforts, our ability to attract and retain employees, our business and results of operations. Our success depends, in part, on our ability to anticipate and address these risks and manage these difficulties.

We continue to invest in our expansion efforts but may not have sufficient customer demand in the future to realize expected returns on these investments.

We are considering the acquisition or lease of additional properties and the construction of new IBX data centers beyond those expansion projects already announced. We will be required to commit substantial operational and financial resources to these IBX data centers, generally 12 to 18 months in advance of securing customer contracts, and we may not have sufficient customer demand in those markets to support these IBX data centers once they are built. In addition, unanticipated technological changes could affect customer requirements for data centers, and we may not have built such requirements into our new IBX data centers. Either of these contingencies, if they were to occur, could make it difficult for us to realize expected or reasonable returns on these investments.

Risks Related to Our Capital Needs and Capital Strategy

Our substantial debt could adversely affect our cash flows and limit our flexibility to raise additional capital.

We have a significant amount of debt and may need to incur additional debt to support our growth. Additional debt may also be incurred to fund future acquisitions, any future special distributions, regular distributions or the other cash outlays associated with maintaining our qualification for taxation as a REIT. As of December 31, 2022, our total indebtedness (gross of debt issuance cost, debt discount, and debt premium) was approximately $15.2 billion, our stockholders' equity was $11.5 billion and our cash and cash equivalents totaled $1.9 billion. In addition, as of December 31, 2022, we had approximately $3.9 billion of additional liquidity available to us from our $4.0 billion revolving credit facility. In addition to our substantial debt, we lease many of our IBX data centers and certain equipment under lease agreements, some of which are accounted for as operating leases. As of December 31, 2022, we recorded operating lease liabilities of $1.4 billion, which represents our obligation to make lease payments under those lease arrangements.

Our substantial amount of debt and related covenants, and our off-balance sheet commitments, could have important consequences. For example, they could:

- require us to dedicate a substantial portion of our cash flow from operations to make interest and principal payments on our debt and in respect of other off-balance sheet arrangements, reducing the availability of our cash flow to fund future capital expenditures, working capital, execution of our expansion strategy and other general corporate requirements;
- increase the likelihood of negative outlook from our credit rating agencies, or of a downgrade to our current rating;
- make it more difficult for us to satisfy our obligations under our various debt instruments;
- increase our cost of borrowing and even limit our ability to access additional debt to fund future growth;
- increase our vulnerability to general adverse economic and industry conditions and adverse changes in governmental regulations;
- limit our flexibility in planning for, or reacting to, changes in our business and industry, which may place us at a competitive disadvantage compared with our competitors;
- limit our operating flexibility through covenants with which we must comply;
- limit our ability to borrow additional funds, even when necessary to maintain adequate liquidity, which would also limit our ability to further expand our business; and
- make us more vulnerable to increases in interest rates because of the variable interest rates on some of our borrowings to the extent we have not entirely hedged such variable rate debt.

The occurrence of any of the foregoing factors could have a material adverse effect on our business, results of operations and financial condition.

We may also need to refinance a portion of our outstanding debt as it matures. There is a risk that we may not be able to refinance existing debt or that the terms of any refinancing may not be as favorable as the terms of our existing debt. Furthermore, if prevailing interest rates or other factors at the time of refinancing result in higher interest rates upon refinancing, then the interest expense relating to that refinanced indebtedness would increase. These risks could materially adversely affect our financial condition, cash flows and results of operations.

Sales or issuances of shares of our common stock may adversely affect the market price of our common stock.

Future sales or issuances of common stock or other equity related securities may adversely affect the market price of our common stock, including any shares of our common stock issued to finance capital expenditures, finance acquisitions or repay debt. In November 2022, we established a successor "at the market" equity offering program (the "2022 ATM Program") in the amount of $1.5 billion under which we may, from time to time, issue and sell shares of our common stock to or through sales agents up to established limits. As of December 31, 2022, we had $1.4 billion available for sale under the 2022 ATM Program. We expect to refresh our ATM program periodically, which could lead to additional dilution for our stockholders in the future. We may also seek authorization to sell additional shares of common stock through other means which could lead to additional dilution for our stockholders. Please see Note 12 within the Consolidated Financial Statements of this Annual Report on Form 10-K for sales of our common stock under our ATM programs.

If we are not able to generate sufficient operating cash flows or obtain external financing, our ability to fund incremental expansion plans may be limited.

Our capital expenditures, together with ongoing operating expenses, obligations to service our debt and the cash outlays associated with our REIT distribution requirements, are, and will continue to be, a substantial burden on our cash flow and may decrease our cash balances. Additional debt or equity financing may not be available when needed or, if available, may not be available on satisfactory terms. Our inability to obtain additional debt and/or equity financing or to generate sufficient cash from operations may require us to prioritize projects or curtail capital expenditures which could adversely affect our results of operations.

Our derivative transactions expose us to counterparty credit risk.

Our derivative transactions expose us to risk of financial loss if a counterparty fails to perform under a derivative contract. Disruptions in the financial markets could lead to sudden decreases in a counterparty's liquidity, which could make them unable to perform under the terms of their derivative contract and we may not be able to realize the benefit of the derivative contract.

Risks Related to Environmental Laws and Climate Change Impacts

Environmental regulations may impose upon us new or unexpected costs.

We are subject to various federal, state and local environmental and health and safety laws and regulations in the United States and at our non-U.S. locations, including those relating to the generation, storage, handling and disposal of hazardous substances and wastes. Certain of these laws and regulations also impose joint and several liability, without regard to fault, for investigation and cleanup costs on current and former owners and operators of real property and persons who have disposed of or released hazardous substances into the environment. Our operations involve the use of hazardous substances and materials such as petroleum fuel for emergency generators, as well as batteries, cleaning solutions and other materials. At some of our locations, hazardous substances or regulated materials are known to be present in soil or groundwater, and there may be additional unknown hazardous substances or regulated materials present at sites we own, operate or lease. At some of our locations, there are land use restrictions in place relating to earlier environmental cleanups that do not materially limit our use of the sites. To the extent any hazardous substances or any other substance or material must be cleaned up or removed from our property, we may be responsible under applicable laws, permits or leases for the removal or cleanup of such substances or materials, the cost of which could be substantial.

We purchase significant amounts of electricity from generating facilities and utility companies that are subject to environmental laws, regulations and permit requirements. These environmental requirements are subject to material change, which could result in increases in our electricity suppliers' compliance costs that may be passed through to us. Regulations promulgated by the U.S. EPA or state agencies, or by regulators in other countries, could limit air emissions from fossil fuel-fired power plants, restrict discharges of cooling water, and otherwise impose new operational restraints on power plants that could increase costs of electricity. Regulatory programs intended to promote increased generation of electricity from renewable sources may also increase our costs of procuring electricity. In addition, we are directly subject to environmental, health and safety laws regulating air emissions, storm water management and other issues arising in our business. For example, our emergency generators are subject to state and federal regulations governing air pollutants, which could limit the operation of those generators or require the installation of new pollution control technologies. While environmental regulations do not normally impose material costs upon our operations, unexpected events, equipment malfunctions, human error and changes in law or regulations, among other factors, can lead to additional capital requirements, limitations upon our operations and unexpected increased costs.

Regulation of greenhouse gas ("GHG") emissions could increase our costs of doing business, for example by increasing the cost of electricity by reducing amounts of electricity generated from fossil fuels, by requiring the use of more expensive generating methods, by requiring capture, management or reduction of GHG emissions, or by imposing taxes or fees upon electricity or GHG emissions. In recent years, there has been interest in the U.S. and in countries where we operate abroad in regulating GHG emissions and otherwise addressing risks related to climate change. For example, in the U.S., new regulations and legislation have been proposed or enacted during the Biden Administration that limit or otherwise seeks to discourage carbon dioxide emissions and the use of fossil fuels. Such regulations and legislation have included or may in the future include measures ranging from direct regulation of GHG emissions to "carbon taxes," and tax incentives to promote the development and use of renewable energy and otherwise lower GHG emissions. Other countries in which we operate may also impose requirements and restrictions on GHG emissions.

In the U.S., state regulations also have the potential to increase our costs of obtaining electricity. Certain U.S. states in which we operate have issued or are considering and may enact environmental regulations that could materially affect our facilities and electricity costs. For example, California has limited GHG emissions from new and existing conventional power plants by imposing regulatory caps and by auctioning the rights to emission allowances. Multiple other states have issued regulations (or are considering regulations) to implement carbon cap and trade programs, carbon pricing programs and other mechanisms designed to limit GHG emissions.

To date, regulations aimed at reducing GHG emissions have not had a material adverse effect on our electricity costs, but potential new regulatory requirements and the market-driven nature of some of the programs could have a material adverse effect on electricity costs in the future. U.S. and global environmental regulations are expected to continue to change and evolve and may impose upon us new or unexpected costs. Concern about climate change and sustainability in various jurisdictions may result in more stringent laws and regulatory requirements regarding emissions of carbon dioxide or other GHGs. Restrictions on carbon dioxide or other GHG emissions could result in significant increases in operating or capital costs, including higher energy costs generally, and increased costs from carbon taxes, emission cap and trade programs and renewable portfolio standards that are imposed upon our electricity suppliers. These higher energy costs, and the cost of complying across our global platform or of failing to comply with these and any other climate change regulations, may have an adverse effect on our business and our results of operations. The course of future legislation and regulation in the U.S. and abroad remains difficult to predict and the potential increased costs associated with national or supra-national GHG regulation and other government policies cannot be estimated at this time.

Our business may be adversely affected by physical risks related to climate change and responses to it.

Severe weather events, such as droughts, fires, flooding, heat waves, hurricanes, typhoons and winter storms, pose a threat to our IBX data centers and our customers' IT infrastructure through physical damage to facilities or equipment, power supply disruption, and long-term effects on the cost of electricity. The frequency and intensity of severe weather events are reportedly increasing as part of broader climate changes. Changes in global weather patterns may also pose long-term risks of physical impacts to our business.

We maintain disaster recovery and business continuity plans that would be implemented in the event of severe weather events that interrupt our business or affect our customers' IT infrastructure housed in our IBX data centers. While these plans are designed to allow us to recover from natural disasters or other events that can interrupt our business, we cannot be certain that our plans will work as intended, to mitigate the impacts of such disasters or events. Failure to prevent impact to customers from such events could adversely affect our business.

We may fail to achieve our ESG and sustainability goals, or may encounter objections to them, either of which may adversely affect public perception of our business and affect our relationship with our customers, our stockholders and/or other stakeholders.

We have prioritized sustainability and ESG objectives, including long term goals of procuring 100% clean and renewable energy coverage and reducing our GHG emissions from our operations and supply chain. We also face pressure from our customers, stockholders and other stakeholders, such as the communities in which we operate, who are increasingly focused on climate change, to prioritize renewable energy procurement, reduce our carbon footprint and promote sustainable practices. To address these goals and concerns, where possible, we plan to continue to scale our renewable energy strategy, seek low-carbon alternatives for traditional fuel sources, use refrigerants that pose fewer risks of environmental impact, and pursue opportunities to improve energy and water efficiency. As a result of these and other initiatives, we intend to make progress towards reducing our environmental impact and global carbon footprint, as well as ensuring that our business remains viable in a low-carbon economy.

Pursing these objectives involves additional costs for conducting our business. For example, developing and acting on ESG initiatives, including collecting, measuring, and reporting information, goals and other metrics can be costly, difficult and time consuming. We have separately undertaken efforts to procure coverage from renewable energy projects in order to support availability in new renewables development. These efforts to support and enhance renewable electricity generation may increase our costs of electricity above those that would be incurred through procurement of conventional electricity from existing sources or through conventional grids. Reducing our carbon footprint may require physical or operational modifications that may be costly. These initiatives could adversely affect our financial position and results of operations.

There is also a risk that our ESG and sustainability objectives will not be successful. It is possible that we may fail to reach our stated environmental goals in a timely manner or that our customers, stockholders or members of our communities might not be satisfied with our sustainability efforts or the speed of their adoption. Our customers, shareholders or others may object to our ESG and sustainability objectives or the manner in which we seek to achieve such objectives. A failure to meet our environmental goals, or significant controversy regarding these goals, could adversely affect public perception of our business, employee morale or customer, stockholder or community support. If we do not meet our customers' or stockholders' expectations regarding those initiatives, or lose support in our communities, our business and/or our share price could be harmed.

There is some indication that ESG and sustainability goals are becoming more controversial, as some governmental entities in the U.S. and certain investor constituencies question the appropriateness of or object to ESG and sustainability initiatives. Some investors may use ESG-related factors to guide their investment strategies and may choose not to invest in us, a factor that would tend to reduce demand for our shares and possibly affect our share price adversely. We also may face potential governmental enforcement actions or private litigation challenging our ESG and sustainability goals, or our disclosure of those goals and our metrics for measuring achievement of them. New or changing regulation or public opinion regarding our ESG and sustainability goals or our actions to achieve them may result in adverse effects on our financial performance, reputation or demand for our services and products, or may otherwise result in obligations and liabilities that cannot predicted or estimated at this time.

Risks Related to Certain Regulations and Laws, Including Tax Laws

Changes in U.S. or foreign tax laws, regulations, or interpretations thereof, including changes to tax rates, may adversely affect our financial statements and cash taxes.

We are a U.S. company with global subsidiaries and are subject to income and other taxes in the U.S. (although currently limited due to our taxation as a REIT) and many foreign jurisdictions. Significant judgment is required in determining our worldwide provision for income and other taxes. Although we believe that we have adequately assessed and accounted for our potential tax liabilities, and that our tax estimates are reasonable, there can be no certainty that additional taxes will not be due upon audit of our tax returns or as a result of changes to the tax laws and interpretations thereof. For example, we are currently undergoing audits in a number of jurisdictions where we operate. The final results of these audits are uncertain and may not be resolved in our favor.

The Organisation for Economic Co-operation and Development ("OECD") is an international association made up of over 30 countries including the U.S. The OECD has proposed and made numerous changes to long-standing tax principles, which, if adopted by the member countries, could have a materially adverse effect on our tax liabilities. For example, various foreign jurisdictions are starting to explore the taxation of digital services and the mechanism of levying a top-up tax through the adoption of OECD tax principles which could have a negative effect on our tax liability.

The ongoing COVID-19 pandemic has led to increased spending by many governments. Because of this, there could be pressure to increase taxes in the future to pay back debts and generate revenues. The nature and timing of any future changes to each jurisdiction's tax laws and the impact on our future tax liabilities because of the COVID-19 pandemic or for any other reason cannot be predicted with any accuracy but could materially and adversely impact our results of operations and financial position or cash flows.

Government regulation or failure to comply with laws and regulations may adversely affect our business.

Various laws and governmental regulations, both in the U.S. and abroad, governing internet-related services, related communications services and information technologies remain largely unsettled, even in areas where there has been some legislative action. For example, the Federal Communications Commission ("FCC") recently overturned network neutrality rules, which may result in material changes in the regulations and contribution regime affecting us and our customers. Furthermore, the U.S. Congress and state legislatures are reviewing and considering changes to the new FCC rules making the future of network neutrality uncertain. Changes to these laws and regulations could have a material adverse effect on us and our customers. There may also be forthcoming regulation in the U.S. on a federal or state level in the areas of cybersecurity, data privacy, sustainability, taxation and data security, any of which could impact us and our customers. Similarly, data privacy regulations continue to evolve and must be addressed by Equinix as a global company.

Additionally, laws and regulations related to economic sanctions, export controls, anti-bribery and anti-corruption, and other international activities may restrict or limit our ability to engage in transactions or dealings with certain counterparties, in or with certain countries or territories, or in certain activities. We cannot guarantee compliance with all such laws and regulations, and failure to comply with such laws and regulations could expose us to fines, penalties, or costly and expensive investigations.

We remain focused on whether and how existing and changing laws, such as those governing intellectual property, privacy, libel, telecommunications services, data flows/data localization, carbon emissions impact, competition and antitrust, and taxation apply to our business and those which might have a material effect on our customers' decisions to purchase our solutions. Substantial resources may be required to comply with regulations or bring any non-compliant business practices into compliance with such regulations. In addition, the continuing development of the market for online commerce and the displacement of traditional telephony service by the internet and related communications services may prompt an increased call for more stringent consumer protection laws or other regulation both in the U.S. and abroad that may impose additional burdens on companies conducting business online and their service providers.

Our business was designated "critical infrastructure" or "essential services" which allowed our data centers to remain open in many jurisdictions during the COVID-19 pandemic. Any regulations restricting our ability to operate our business due to the COVID-19 pandemic or for any other reason could have a material adverse effect on our business. Additionally, these "essential services" and "critical infrastructure" designations could lead countries or local regulators to impose additional regulations on the data center industry in order to have better visibility and control over our industry for future events and crises.

We strive to comply with all laws and regulations that apply to our business. However, as these laws evolve, they can be subject to varying interpretations and regulatory discretion. To the extent a regulator or court disagrees with our interpretation of these laws and determines that our practices are not in compliance with applicable laws and regulations, we could be subject to civil and criminal penalties that could adversely affect our business operations. The adoption, or modification of laws or regulations relating to the internet and our business, or interpretations of existing laws, could have a material adverse effect on our business, financial condition and results of operations.

Our business could be adversely affected if we are unable to maintain our complex global legal entity structure.

We maintain a complex global organizational structure, containing numerous legal entities of varied types and serving various purposes, in each country in which we operate. For example, in order to maintain our qualification as a REIT for U.S. federal income tax purposes, a large portion of our gross income for each taxable year must be derived from real estate. To facilitate meeting this REIT compliance requirement, we use TRSs and qualified REIT subsidiaries ("QRSs") in order to segregate our income between net income from real estate and net income from TRSs. This results in almost double the number of entities we would typically need if we were not maintaining qualification as a REIT.

Additionally, we maintain certain other region-specific organizational structures for various tax, legal and other business purposes. The organization, maintenance and reporting requirements for our entity structure are complex and require coordination amongst many teams within Equinix and the use of outside service providers. While we use automation tools and software where possible to manage this process, some work continues to be manual. We believe we have adequate controls in place to manage these complex structures, but if our controls fail, there could be significant legal and tax implications to our business and our operations including but not limited to material tax and legal liabilities.

Risks Related to Our REIT Status in the US

We may not remain qualified for taxation as a REIT.

We elected to be taxed as a REIT for U.S. federal income tax purposes beginning with our 2015 taxable year. We believe that our organization and method of operation comply with the rules and regulations promulgated under the Internal Revenue Code of 1986, as amended (the "Code"), such that we will continue to qualify for taxation as a REIT. However, we cannot assure you that we have qualified for taxation as a REIT or that we will remain so qualified. Qualification for taxation as a REIT involves the application of highly technical and complex provisions of the Code to our operations as well as various factual determinations concerning matters and circumstances not entirely within our control. There are limited judicial or administrative interpretations of applicable REIT provisions of the Code.

If, in any taxable year, we fail to remain qualified for taxation as a REIT and are not entitled to relief under the Code:

- we will not be allowed a deduction for distributions to stockholders in computing our taxable income;
- we will be subject to U.S. federal and state income tax on our taxable income at regular corporate income tax rates; and
- we would not be eligible to elect REIT status again until the fifth taxable year that begins after the first year for which we failed to qualify for taxation as a REIT.

Any such corporate tax liability could be substantial and would reduce the amount of cash available for other purposes. If we fail to remain qualified for taxation as a REIT, we may need to borrow additional funds or liquidate some investments to pay any additional tax liability. Accordingly, funds available for investment and distributions to stockholders could be reduced.

As a REIT, failure to make required distributions would subject us to federal corporate income tax.

We paid quarterly distributions in each quarter of 2022 and have declared a quarterly distribution to be paid on March 22, 2023. The amount, timing and form of any future distributions will be determined, and will be subject to adjustment, by our Board of Directors. To remain qualified for taxation as a REIT, we are generally required to distribute at least 90% of our REIT taxable income (determined without regard to the dividends paid deduction and excluding net capital gain) each year, or in limited circumstances, the following year, to our stockholders. Generally, we expect to distribute all or substantially all of our REIT taxable income. If our cash available for distribution falls short of our estimates, we may be unable to maintain distributions that approximate our REIT taxable income and may fail to remain qualified for taxation as a REIT. In addition, our cash flows from operations may be insufficient to fund required distributions as a result of differences in timing between the actual receipt of income and the payment of expenses and the recognition of income and expenses for federal income tax purposes, or the effect of nondeductible expenditures, such as capital expenditures, payments of compensation for which Section 162(m) of the Code denies a deduction, interest expense deductions limited by Section 163(j) of the Code, the creation of reserves or required debt service or amortization payments.

To the extent that we satisfy the 90% distribution requirement but distribute less than 100% of our REIT taxable income, we will be subject to federal corporate income tax on our undistributed taxable income. In addition, we will be subject to a 4% nondeductible excise tax on our undistributed taxable income if the actual amount that we distribute to our stockholders for a calendar year is less than the minimum amount specified under the Code.

Complying with REIT requirements may limit our flexibility or cause us to forgo otherwise attractive opportunities.

To remain qualified for taxation as a REIT for U.S. federal income tax purposes, we must satisfy tests concerning, among other things, the sources of our income, the nature and diversification of our assets and the amounts we distribute to our stockholders. For example, under the Code, no more than 20% of the value of the assets of a REIT may be represented by securities of one or more TRSs. Similar rules apply to other nonqualifying assets. These limitations may affect our ability to make large investments in other non-REIT qualifying operations or assets. In addition, in order to maintain our qualification for taxation as a REIT, we must distribute at least 90% of our REIT taxable income, determined without regard to the dividends paid deduction and excluding any net capital gains. Even if we maintain our qualification for taxation as a REIT, we will be subject to U.S. federal income tax at regular corporate income tax rates for our undistributed REIT taxable income, as well as U.S. federal income tax at regular corporate income tax rates for income recognized by our TRSs; we also pay taxes in the foreign jurisdictions in which our international assets and operations are held and conducted regardless of our qualification for taxation as a REIT. Because of these distribution requirements, we will likely not be able to fund future capital needs and investments from operating cash flow. As such, compliance with REIT tests may hinder our ability to make certain attractive investments, including the purchase of significant nonqualifying assets and the material expansion of non-real estate activities.

Our use of TRSs, including for certain of our international operations, may cause us to fail to remain qualified for taxation as a REIT in the U.S.

Our operations include using TRSs to facilitate meeting the REIT compliance requirements. The net income of our TRSs is not fully included in our QRS, and income that is not included in our QRSs generally is not subject to the REIT income distribution requirement. Our ability to receive distributions from our TRSs is limited by the rules with which we must comply to maintain our qualification for taxation as a REIT. In particular, at least 75% of our gross income for each taxable year as a REIT must be derived from real estate. Consequently, no more than 25% of our gross income may consist of dividend income from our TRSs and other nonqualifying types of income. Thus, our ability to receive distributions from our TRSs may be limited and may impact our ability to fund distributions to our stockholders using cash flows from our TRSs.

Further, there may be limitations on our ability to accumulate earnings in our TRSs and the accumulation or reinvestment of significant earnings in our TRSs could result in adverse tax treatment. In particular, if the accumulation of cash in our TRSs causes (1) the fair market value of our securities in our TRSs to exceed 20% of the fair market value of our assets or (2) the fair market value of our securities in our TRSs and other nonqualifying assets to exceed 25% of the fair market value of our assets, then we will fail to remain qualified for taxation as a REIT. Further, a substantial portion of our TRSs are overseas, and a material change in foreign currency rates could also negatively impact our ability to remain qualified for taxation as a REIT.

The Code imposes limitations on the ability of our TRSs to utilize specified income tax deductions, including limits on the use of net operating losses and limits on the deductibility of interest expense.

Even if we remain qualified for taxation as a REIT, some of our business activities are subject to corporate level income tax and foreign taxes, which will continue to reduce our cash flows, and we will have potential deferred and contingent tax liabilities.

Even if we remain qualified for taxation as a REIT, we may be subject to some federal, state, local and foreign taxes, including taxes on any undistributed income, and state, local or foreign income, franchise, property and transfer taxes. In addition, we could in certain circumstances be required to pay an excise or penalty tax, which could be significant in amount, in respect of dealer property income or in order to utilize one or more relief provisions under the Code to maintain our qualification for taxation as a REIT.

A portion of our business is conducted through wholly-owned TRSs because certain of our business activities could generate nonqualifying REIT income as currently structured and operated. The income of our U.S. TRSs will continue to be subject to federal and state corporate income taxes. In addition, our international assets and operations will continue to be subject to taxation in the foreign jurisdictions where those assets are held or those operations are conducted. Any of these taxes would decrease our earnings and our available cash.

We will also be subject to a U.S. federal corporate level income tax at the highest regular corporate income tax rate on gain recognized from a sale of a REIT asset where our basis in the asset is determined by reference to the basis of the asset in the hands of a C corporation (such as an asset that we or our QRSs hold following the liquidation or other conversion of a former TRS). This tax is generally applicable to any disposition of such an asset during the five-year period after the date we first owned the asset as a REIT asset, to the extent of the built-in-gain based on the fair market value of such asset on the date we first held the asset as a REIT asset.

Our certificate of incorporation contains restrictions on the ownership and transfer of our stock, though they may not be successful in preserving our qualification for taxation as a REIT.

In order for us to remain qualified for taxation as a REIT, no more than 50% of the value of outstanding shares of our stock may be owned, beneficially or constructively, by five or fewer individuals at any time during the last half of each taxable year. In addition, rents from "affiliated tenants" will not qualify as qualifying REIT income if we own 10% or more by vote or value of the customer, whether directly or after application of attribution rules under the Code. Subject to certain exceptions, our certificate of incorporation prohibits any stockholder from owning, beneficially or constructively, more than (i) 9.8% in value of the outstanding shares of all classes or series of our capital stock or (ii) 9.8% in value or number, whichever is more restrictive, of the outstanding shares of any class or series of our capital stock. We refer to these restrictions collectively as the "ownership limits" and we included them in our certificate of incorporation to facilitate our compliance with REIT tax rules. The constructive ownership rules under the Code are complex and may cause the outstanding stock owned by a group of related individuals or entities to be deemed to be constructively owned by one individual or entity. As a result, the acquisition of less than 9.8% of our outstanding common stock (or the outstanding shares of any class or series of our stock) by an individual or entity could cause that individual or entity or another individual or entity to own constructively in excess of the relevant ownership limits. Any attempt to own or transfer shares of our common stock or of any of our other capital stock in violation of these restrictions may result in the shares being automatically transferred to a charitable trust or may be void. Even though our certificate of incorporation contains the ownership limits, there can be no assurance that these provisions will be effective to prevent our qualification for taxation as a REIT from being jeopardized, including under the affiliated tenant rule. Furthermore, there can be no assurance that we will be able to monitor and enforce the ownership limits. If the restrictions in our certificate of incorporation are not effective and, as a result, we fail to satisfy the REIT tax rules described above, then absent an applicable relief provision, we will fail to remain qualified for taxation as a REIT.

In addition, the ownership and transfer restrictions could delay, defer or prevent a transaction or a change in control that might involve a premium price for our stock or otherwise be in the best interest of our stockholders. As a result, the overall effect of the ownership and transfer restrictions may be to render more difficult or discourage any attempt to acquire us, even if such acquisition may be favorable to the interests of our stockholders.

General Risk Factors

The effects of the COVID-19 or any other pandemic could have a negative effect on our business, results of operations and financial condition.

We have continuously monitored our global operations in light of the COVID-19 pandemic. We have implemented procedures focusing on the health and safety of our employees, customers, partners and communities, the continuity of our business offerings and compliance with governmental regulations and local public health guidance and ordinances. While our business operations have continued without interruption and our IBX data centers have remained fully operational to date, we cannot guarantee our business operations or our IBX data centers will not be negatively impacted in the future because of the COVID-19 or any other pandemic.

The market price of our stock may continue to be highly volatile, and the value of an investment in our common stock may decline.

The market price of the shares of our common stock has recently been and may continue to be highly volatile. General economic and market conditions, like the ones we are currently experiencing, and market conditions for telecommunications, data center and REIT stocks in general, may affect the market price of our common stock.

Announcements by us or others, or speculations about our future plans, may also have a significant impact on the market price of our common stock. These may relate to:

- news or regulations regarding the ongoing COVID-19 or any other pandemic;
- our results of operations or forecasts;
- new issuances of equity, debt or convertible debt by us, including issuances through any existing ATM Program;
- increases in market interest rates and changes in other general market and economic conditions, including inflationary concerns;
- changes to our capital allocation, tax planning or business strategy;
- our qualification for taxation as a REIT and our declaration of distributions to our stockholders;
- changes in U.S. or foreign tax laws;
- changes in management or key personnel;
- developments in our relationships with customers;
- announcements by our customers or competitors;
- changes in regulatory policy or interpretation;
- governmental investigations;
- changes in the ratings of our debt or stock by rating agencies or securities analysts;
- our purchase or development of real estate and/or additional IBX data centers;
- our acquisitions of complementary businesses; or
- the operational performance of our IBX data centers.

The stock market has from time to time experienced extreme price and volume fluctuations, which have particularly affected the market prices for telecommunications companies, and which have often been unrelated to their operating performance. These broad market fluctuations may adversely affect the market price of our common stock. One of the factors that investors may consider in deciding whether to buy or sell our common stock is our distribution rate as a percentage of our stock price relative to market interest rates. If market interest rates increase, prospective investors may demand a higher distribution rate or seek alternative investments paying higher dividends or interest. As a result, interest rate fluctuations and conditions in the capital markets may affect the market value of our common stock. Furthermore, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and/or damages, and divert management's attention from other business concerns, which could seriously harm our business.

Inadequate or inaccurate external and internal information, including budget and planning data, could lead to inaccurate financial forecasts and inappropriate financial decisions.

Our financial forecasts are dependent on estimates and assumptions regarding budget and planning data, market growth, foreign exchange rates, our ability to remain qualified for taxation as a REIT, and our ability to generate sufficient cash flow to reinvest in the business, fund internal growth, make acquisitions, pay dividends and meet our debt obligations. Our financial projections are based on historical experience and on various other assumptions that our management believes to be reasonable under the circumstances and at the time they are made.

We continue to evolve our forecasting models as necessary and appropriate but if our predictions are inaccurate and our results differ materially from our forecasts, we could make inappropriate financial decisions. Additionally, inaccuracies in our models could adversely impact our compliance with REIT asset tests, future profitability, stock price and/or stockholder confidence.

Fluctuations in foreign currency exchange rates, especially the strength of the U.S. dollar, in the markets in which we operate internationally could harm our results of operations.

We have experienced and may continue to experience gains and losses resulting from fluctuations in foreign currency exchange rates. To date, the majority of revenues and costs in our international operations are denominated in foreign currencies. As we experienced in 2022, where our prices are denominated in U.S. Dollars, our sales and revenues could be adversely affected by declines in foreign currencies relative to the U.S. Dollar, thereby making our offerings more expensive in local currencies. We are also exposed to risks resulting from fluctuations in foreign currency exchange rates in connection with our international operations. To the extent we are paying contractors in foreign currencies, our operations could cost more than anticipated as a result of declines in the U.S. Dollar relative to foreign currencies. In addition, fluctuating foreign currency exchange rates have a direct impact on how our international results of operations translate into U.S. Dollars.

Although we currently undertake, and may decide in the future to further undertake, foreign exchange hedging transactions to reduce foreign currency transaction exposure, we do not currently intend to eliminate all foreign currency transaction exposure. In addition, REIT compliance rules may restrict our ability to enter into hedging transactions. Therefore, any weakness of the U.S. Dollar may have a positive impact on our consolidated results of operations because the currencies in the foreign countries in which we operate may translate into more U.S. Dollars. However, as we have experienced more recently, if the U.S. Dollar strengthens relative to the currencies of the foreign countries in which we operate, our consolidated financial position and results of operations may be negatively impacted as amounts in foreign currencies will generally translate into fewer U.S. Dollars. For additional information on foreign currency risks, refer to our discussion of foreign currency risk in "Quantitative and Qualitative Disclosures About Market Risk" included in Item 2 of this Annual Report on Form 10-K.

If our internal controls are found to be ineffective, our financial results or our stock price may be adversely affected.

Our most recent evaluation of our controls resulted in our conclusion that, as of December 31, 2022, in compliance with Section 404 of the Sarbanes-Oxley Act of 2002, our internal controls over financial reporting were effective. Our ability to manage our operations and growth through, for example, the integration of recently acquired businesses, the adoption of new accounting principles and tax laws, and our overhaul of our back office systems that, for example, support the customer experience from initial quote to customer billing and our revenue recognition process, will require us to further develop our controls and reporting systems and implement or amend new or existing controls and reporting systems in those areas where the implementation and integration is still ongoing. All of these changes to our financial systems and the implementation and integration of acquisitions create an increased risk of deficiencies in our internal controls over financial reporting. If, in the future, our internal control over financial reporting is found to be ineffective, or if a material weakness is identified in our controls over financial reporting, our financial results may be adversely affected. Investors may also lose confidence in the reliability of our financial statements which could adversely affect our stock price.

Terrorist activity, or other acts of violence, including violence stemming from the current climate of political and economic uncertainty, could adversely impact our business.

The continued threat of terrorist activity and other acts of war or hostility both domestically and abroad by terrorist organizations, organized crime organizations, or other criminals along with violence stemming from political unrest, contribute to a climate of political and economic uncertainty in many of the regions in which we operate. Due to existing or developing circumstances, we may need to incur additional costs in the future to provide enhanced security, including cyber security and physical security, which could have a material adverse effect on our business and results of operations. These circumstances may also adversely affect our ability to attract and retain customers and employees, our ability to raise capital and the operation and maintenance of our IBX data centers.

We may be subject to securities class action and other litigation, which may harm our business and results of operations.

We may be subject to securities class action or other litigation. For example, securities class action litigation has often been brought against a company following periods of volatility in the market price of its securities. Litigation can be lengthy, expensive, and divert management's attention and resources. Results cannot be predicted with certainty and an adverse outcome in litigation could result in monetary damages or injunctive relief. Further, any payments made in settlement may directly reduce our revenue under U.S. GAAP and could negatively impact our results of operations for the period. For all of these reasons, litigation could seriously harm our business, results of operations, financial condition or cash flows.

We may not be able to protect our intellectual property rights.

We cannot make assurances that the steps taken by us to protect our intellectual property rights will be adequate to deter misappropriation of proprietary information or that we will be able to detect unauthorized use and take appropriate steps to enforce our intellectual property rights. We also are subject to the risk of litigation alleging infringement of third-party intellectual property rights. Any such claims could require us to spend significant sums in litigation, pay damages, develop non-infringing intellectual property or acquire licenses to the intellectual property that is the subject of the alleged infringement.

We have various mechanisms in place that may discourage takeover attempts.

Certain provisions of our certificate of incorporation and bylaws may discourage, delay or prevent a third party from acquiring control of us in a merger, acquisition or similar transaction that a stockholder may consider favorable. Such provisions include:

- ownership limitations and transfer restrictions relating to our stock that are intended to facilitate our compliance with certain REIT rules relating to share ownership;
- authorization for the issuance of "blank check" preferred stock;
- the prohibition of cumulative voting in the election of directors;
- limits on the persons who may call special meetings of stockholders;
- limits on stockholder action by written consent; and
- advance notice requirements for nominations to the Board of Directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

In addition, Section 203 of the Delaware General Corporation Law, which restricts certain business combinations with interested stockholders in certain situations, may also discourage, delay or prevent someone from acquiring or merging with us.

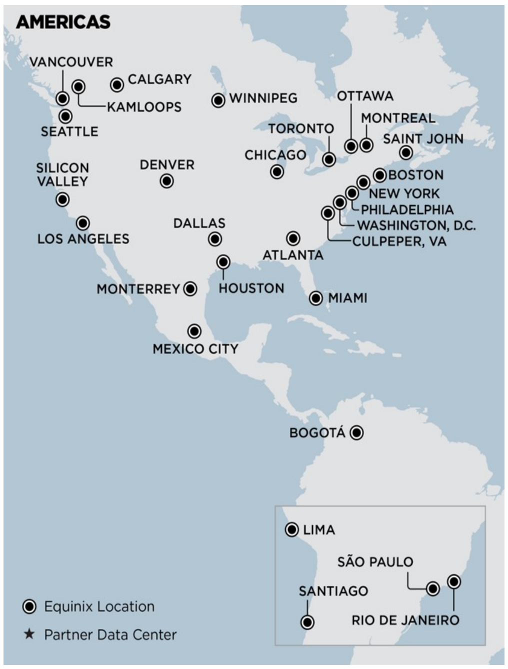
ITEM 1B. Unresolved Staff Comments

There is no disclosure to report pursuant to Item 1B.

ITEM 2. Properties

Our executive offices are located in Redwood City, California, with sales offices in several cities throughout the U.S. Our Asia-Pacific headquarters office is located in Hong Kong and we also have sales offices in several cities throughout Asia-Pacific. Our EMEA headquarters office is located in Amsterdam, the Netherlands and we also have sales offices in several cities throughout EMEA.

The following tables present the locations of our leased and owned IBX data centers and xScale ™ data centers investments as of December 31, 2022.



AMERICAS

Metro	Leased [1]	Owned [1] [2]
Atlanta	●	●
Bogota		●
Boston		●
Calgary	●	●
Chicago	●	●
Culpeper		●
Dallas	●	●
Washington D.C./Ashburn	●	●
Denver	●	●
Houston		●
Kamloops		●
Lima		●
Los Angeles	●	●
Mexico City		●
Miami	●	●
Monterrey	●	
Montreal	●	
New York	●	●
Ottawa		●
Philadelphia	●	
Rio de Janeiro	●	●
Santiago		●
Sao Paulo		●
Seattle	●	●
Silicon Valley	●	●
Saint John		●
Toronto	●	●
Vancouver	●	
Winnipeg	●	

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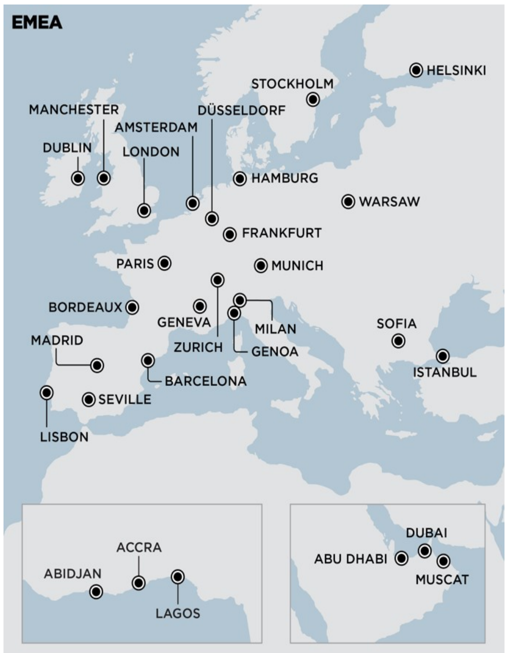


EMEA

Metro	Leased [1]	Owned [1] [2]
Abidjan		•
Abu Dhabi	•	
Accra		•
Amsterdam	•	•
Barcelona	•	
Bordeaux		•
Dubai	•	
Dublin	•	•
Dusseldorf		•
East Netherlands	•	
Frankfurt	•	•
Geneva	•	
Genoa		•
Hamburg		•
Helsinki	•	•
Istanbul		•
Lagos		•
Lisbon		•
London	•	•
Madrid	•	
Manchester	•	•
Milan	•	•
Munich	•	•
Muscat		•
Paris	•	•
Seville	•	
Sofia		•
Stockholm	•	•
Warsaw	•	•
Zurich	•	•

Asia-Pacific

Metro	Leased [1]	Owned [1] [2]
Adelaide		●
Brisbane		●
Canberra		●
Hong Kong	●	
Melbourne		●
Mumbai	●	
Osaka	●	●
Perth		●
Seoul	●	
Singapore	●	●
Shanghai	●	●
Sydney	●	●
Tokyo	●	●

(1) "●" denotes locations with one or more data centers.

(2) Owned sites include IBX data centers subject to long-term ground leases.

The following table presents an overview of our portfolio of IBX data centers as of December 31, 2022:

	# of IBXs [1]	Total Cabinet Capacity [1][2]	Cabinets Billed[1]	Cabinet Utilization % [1][3]	MRR per Cabinet [1][4]
Americas	106	134,900	108,200	80 %	$ 2,419
EMEA	82	132,000	110,000	83 %	1,654
Asia-Pacific	48	77,600	64,100	83 %	1,925
Total	**236**	**344,500**	**282,300**		

(1) Excludes twelve unconsolidated entities (eleven xScale data centers and the MC1 IBX data center).

(2) Cabinets represent a specific amount of space within an IBX data center. Customers can combine and use multiple adjacent cabinets within an IBX data center, depending on their space requirements.

(3) The cabinet utilization rate represents the percentage of cabinet space billed versus total cabinet capacity, taking into consideration power limitations.

(4) MRR per cabinet represents average monthly recurring revenue recognized divided by the average number of cabinets billing during the fourth quarter of the year. Americas MRR per cabinet excludes Infomart non-IBX tenant income.

The following table presents a summary of our significant IBX data center expansion projects under construction as of December 31, 2022:

Property	Property Location	Target Open Date	Sellable Cabinets	Total Capex (in Millions) [1]
Americas:				
CL3 phase II	Calgary	Q1 2023	550	$ 38
KA1 phase II	Kamloops	Q1 2023	250	22
AT1 phases VI & VII	Atlanta	Q2 2023	575	43
BG2 phase I	Bogota	Q2 2023	550	45
DA11 phase II	Dallas	Q3 2023	1,975	64
DC16 phase I	Washington D.C.	Q3 2023	3,200	198
MT2 phase I	Montreal	Q3 2023	500	28
SV11 phase II	Silicon Valley	Q3 2023	1,450	60
DC21 phase III	Washington D.C.	Q4 2023	1,325	31
SE4 phase III	Seattle	Q4 2023	375	30
MT2 phase II	Montreal	Q4 2023	500	22
MX2 phase III	Mexico City	Q2 2024	1,200	56
NY11 phase IV	New York	Q2 2024	550	87
NY3 phase I	New York	Q3 2024	1,200	250
			14,200	974
EMEA:				
FR5 phase V	Frankfurt	Q1 2023	650	43
LD8 phase IV	London	Q1 2023	550	36
MD6 phase I	Madrid	Q1 2023	600	5
PA6 phase II	Paris	Q1 2023	275	16
DX3 phase I	Dubai	Q2 2023	900	61
ML5 phase III	Milan	Q2 2023	500	12
SO2 phase II	Sofia	Q2 2023	350	12
BX1 phases II, III, & IV	Bordeaux	Q4 2023	800	64
FR13 phase I	Frankfurt	Q4 2023	1,125	104
Lagos2 phase II	Lagos	Q4 2023	150	9
BA2 phase I	Barcelona	Q1 2024	650	56
JN1 phase I	Johannesburg	Q2 2024	700	21
MU4 phase II	Munich	Q2 2024	750	22
PA10 phase II	Paris	Q2 2024	700	32
IL4 phase I	Istanbul	Q3 2024	1,125	64
			9,825	557
Asia-Pacific:				
SY6 phase II	Sydney	Q1 2023	500	43
SG5 phases V & VI	Singapore	Q2 2023	1,500	61
TY11 phase IV	Tokyo	Q4 2023	675	55
JH1 phase I	Johor	Q1 2024	500	39
OS3 phase III	Osaka	Q2 2024	600	20
SL4 phase I	Seoul	Q2 2024	475	6
SY5 phase III	Sydney	Q2 2024	2,675	121
CN1 phase I	Chennai	Q2 2024	850	65
TY15 phase I	Tokyo	Q3 2024	1,200	115
JK1 phase I	Jakarta	Q4 2024	575	32
MB3 phase I	Mumbai	Q4 2024	1,375	86
			10,925	643
Total			**34,950**	**$ 2,174**

[1] Capital expenditures are approximate and may change based on final construction details.

ITEM 3.   Legal Proceedings

None.

ITEM 4.   Mine Safety Disclosure

Not applicable.

PART II

ITEM 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is quoted on the NASDAQ Global Select Market under the symbol of "EQIX." Our common stock began trading in August 2000. As of January 31, 2022, we had 92,666,516 shares of our common stock outstanding held by approximately 349 registered holders. During the years ended December 31, 2022 and 2021, we did not issue or sell any securities on an unregistered basis.

Stock Performance Graph

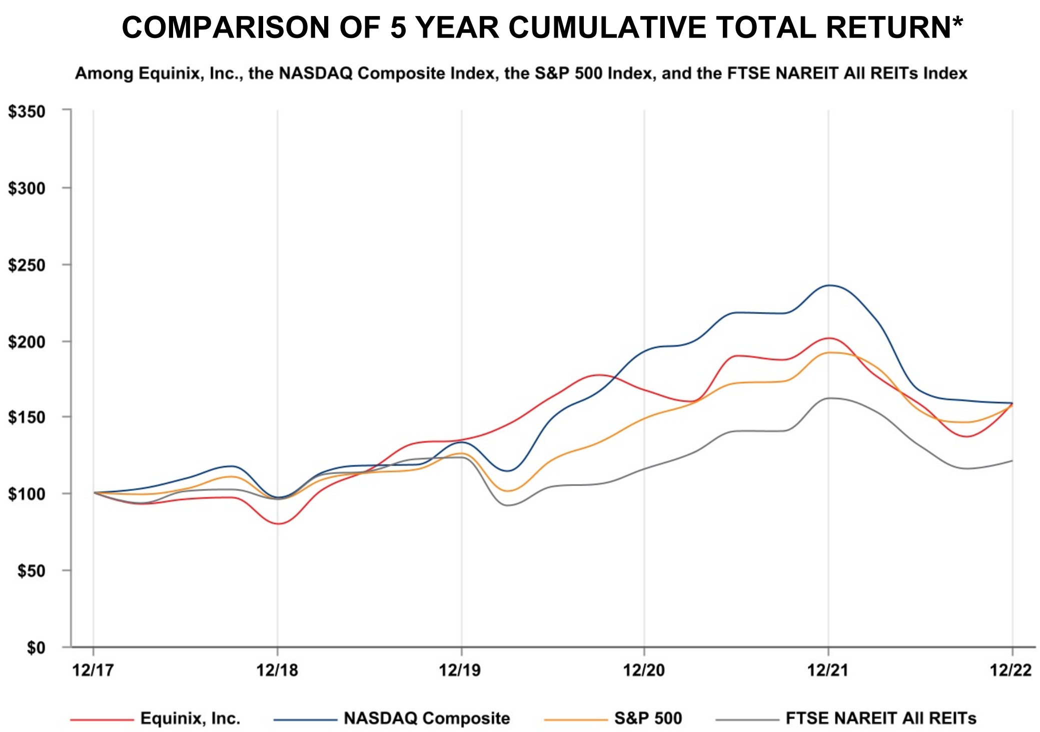
The graph set forth below compares the cumulative total stockholder return on Equinix's common stock between December 31, 2017 and December 31, 2022 with the cumulative total return of:

- the S&P 500 Index;
- the NASDAQ Composite Index; and
- the FTSE NAREIT All REITs Index.

The graph assumes the investment of $100.00 on December 31, 2017 in Equinix's common stock and in each index, and assumes the reinvestment of dividends, if any.

Equinix cautions that the stock price performance shown in the graph below is not indicative of, nor intended to forecast, the potential future performance of Equinix's common stock.

Notwithstanding anything to the contrary set forth in any of Equinix's previous or future filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, that might incorporate this Annual Report on Form 10-K or future filings made by Equinix under those statutes, the stock performance graph shall not be deemed filed with the Securities and Exchange Commission and shall not be deemed incorporated by reference into any of those prior filings or into any future filings made by Equinix under those statutes.



*$100 invested on 12/31/17 in stock or index, including reinvestment of dividends.
Fiscal year ending December 31.

ITEM 6. [Reserved]

ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

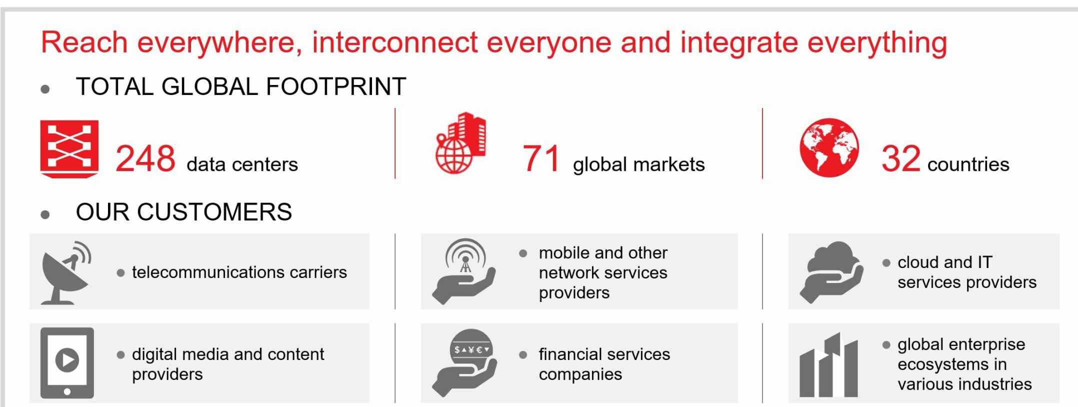
The following commentary should be read in conjunction with the financial statements and related notes contained elsewhere in this Annual Report on Form 10-K. The information in this discussion contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements are based upon current expectations that involve risks and uncertainties. Any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. For example, the words "believes," "anticipates," "plans," "expects," "intends" and similar expressions are intended to identify forward-looking statements. Our actual results and the timing of certain events may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such a discrepancy include, but are not limited to, those discussed in "Liquidity and Capital Resources" and "Risk Factors" elsewhere in this Annual Report on Form 10-K. All forward-looking statements in this document are based on information available to us as of the date hereof and we assume no obligation to update any such forward-looking statements.

Item 7 of this Form 10-K focuses on discussion of 2022 and 2021 items as well as 2022 results as compared to 2021 results. For the discussion of 2020 items and 2021 results as compared to 2020 results, please refer to Item 7 of our 2021 Form 10-K as filed with the SEC on February 18, 2022.

Our management's discussion and analysis of financial condition and results of operations is intended to assist readers in understanding our financial information from our management's perspective and is presented as follows:

- Overview
- Results of Operations
- Non-GAAP Financial Measures
- Liquidity and Capital Resources
- Critical Accounting Policies and Estimates
- Recent Accounting Pronouncements

Overview



*Metrics as of 12/31/2022, including 12 data centers held in unconsolidated entities (11 xScale™ data centers and the MC1 data center)

We provide a global, vendor-neutral data center, interconnection and edge solutions platform with offerings that aim to enable our customers to reach everywhere, interconnect everyone and integrate everything. Global enterprises, service providers and business ecosystems of industry partners rely on our IBX data centers and expertise around the world for the safe housing of their critical IT equipment and to protect and connect the world's most valued information assets. They also look to Platform Equinix® for the ability to directly and securely interconnect to the networks, clouds and content that enable today's information-driven global digital economy. Our recent IBX data center openings and acquisitions, as well as xScale ™ data center investments, have expanded our total global footprint to 248 data centers, including 11 xScale data centers and the MC1 data center that are held in unconsolidated joint ventures, across 71 markets around the world. We offer the following solutions:

- premium data center colocation;
- interconnection and data exchange solutions;
- edge solutions for deploying networking, security and hardware; and
- remote expert support and professional services.

Our interconnected data centers around the world allow our customers to increase information and application delivery performance to users, and quickly access distributed IT infrastructures and business and digital ecosystems, while significantly reducing costs. Our global platform and the quality of our IBX data centers, interconnection offerings and edge solutions have enabled us to establish a critical mass of customers. As more customers choose Platform Equinix for bandwidth cost and performance reasons, it benefits their suppliers and business partners to colocate in the same data centers. This adjacency creates a “network effect” that enables our customers to capture the full economic and performance benefits of our offerings. These partners, in turn, pull in their business partners, creating a "marketplace" for their services. Our global platform enables scalable, reliable and cost-effective interconnection that increases data traffic exchange while lowering overall cost and increasing flexibility. Our focused business model is built on our critical mass of enterprise and service provider customers and the resulting "marketplace" effect. This global platform, combined with our strong financial position, has continued to drive new customer growth and bookings.

Historically, our market was served by large telecommunications carriers who bundled their products and services with their colocation offerings. The data center market landscape has evolved to include private and vendor-neutral multi-tenant data center ("MTDC") providers, hyperscale cloud providers, managed infrastructure and application hosting providers, and systems integrators. It is estimated that Equinix is one of more than 2,200 companies that provide MTDC offerings around the world. Each of these data center solutions providers can bundle various colocation, interconnection and network offerings and outsourced IT infrastructure solutions. We are able to offer our customers a global platform that reaches 32 countries with the industry’s largest and most active ecosystem of partners in our sites, proven operational reliability, improved application performance and a highly scalable set of offerings.

Our cabinet utilization rate represents the percentage of cabinet space billed versus total cabinet capacity, which is used to measure how efficiently we are managing our cabinet capacity. Our cabinet utilization rate varies from market to market among our IBX data centers across our Americas, EMEA and Asia-Pacific regions. Our cabinet utilization rates were approximately 82% and 79%, as of December 31, 2022 and 2021, respectively. We continue to monitor the available capacity in each of our selected markets. To the extent we have limited capacity available in a given market, it may limit our ability for growth in that market. We perform demand studies on an ongoing basis to determine if future expansion is warranted in a market. In addition, power and cooling requirements for most customers are growing on a per unit basis. As a result, customers are consuming an increasing amount of power per cabinet. Although we generally do not control the amount of power our customers draw from installed circuits, we have negotiated power consumption limitations with certain high power-demand customers. This increased power consumption has driven us to build out our new IBX data centers to support power and cooling needs twice that of previous IBX data centers. We could face power limitations in our IBX data centers, even though we may have additional physical cabinet capacity available within a specific IBX data center. This could have a negative impact on our ability to grow revenues, affecting our financial performance, results of operations and cash flows.

To serve the needs of the growing hyperscale data center market, including the world's largest cloud service providers, we have entered into joint ventures to develop and operate xScale data centers. In the past two years, we have closed multiple joint ventures in the form of limited liability partnerships with GIC Private Limited, Singapore's sovereign wealth fund ("GIC") and an additional joint venture in the form of a limited liability partnership with PGIM Real Estate ("PGIM").

Strategically, we will continue to look at attractive opportunities to grow our market share and selectively improve our footprint and offerings. As was the case with our recent expansions and acquisitions, our expansion criteria will be dependent on a number of factors, including but not limited to demand from new and existing customers, quality of the design, power capacity, access to networks, clouds and software partners, capacity availability in the current market location, amount of incremental investment required by us in the targeted property, automation capabilities, developer talent pool, lead-time to break even on a free cash flow basis and in-place customers. Like our recent expansions and acquisitions, the right combination of these factors may be attractive to us. Depending on the circumstances, these transactions may require additional capital expenditures funded by upfront cash payments or through long-term financing arrangements in order to bring these properties up to our standards. Property expansion may be in the form of purchases of real property, long-term leasing arrangements or acquisitions. Future purchases, construction or acquisitions may be completed by us or with partners or potential customers to minimize the outlay of cash, which can be significant.

Revenue:

>90% | <10%

RECURRING REVENUES
colocation and related interconnection and managed infrastructure offerings

- recurring revenues comprised > 90% of our total revenues during the past 3 years
- > 90% of our monthly recurring revenue bookings during the past 3 years came from existing customers, contributing to our revenue growth
- 3% of our recurring revenues over the last 3 years came from our largest customer
- 36% of our recurring revenue came from our 50 largest customers in 2022

NON-RECURRING REVENUES
primarily installation services related to a customer's initial deployment and professional services we perform

Our business is based on a recurring revenue model comprised of colocation and related interconnection and managed infrastructure offerings. We consider these offerings recurring because our customers are generally billed on a fixed and recurring basis each month for the duration of their contract, which is generally one to three years in length, and thereafter automatically renews in one-year increments. Our recurring revenues have comprised more than 90% of our total revenues during the past three years. In addition, during the past three years, more than 90% of our monthly recurring revenue bookings came from existing customers, contributing to our revenue growth. Our largest customer accounted for approximately 3% of our recurring revenues for the years ended December 31, 2022, 2021 and 2020. Our 50 largest customers accounted for approximately 36% of our recurring revenues for the year ended December 31, 2022 and 39% of our recurring revenues for the years ended 2021 and 2020.

Our non-recurring revenues are primarily derived from fees charged from installations related to a customer's initial deployment and professional services we perform. These services are considered to be non-recurring because they are billed typically once, upon completion of the installation or the professional services work performed. The majority of these non-recurring revenues are typically billed on the first invoice distributed to the customer in connection with their initial installation. However, revenues from installations are deferred and recognized ratably over the period of the contract term. Additionally, revenue from contract settlements, when a customer wishes to terminate their contract early, is generally treated as a contract modification and recognized ratably over the remaining term of the contract, if any. As a percentage of total revenues, we expect non-recurring revenues to represent less than 10% of total revenues for the foreseeable future.

Operating Expenses:

Cost of Revenues. The largest components of our cost of revenues are depreciation, rental payments related to our leased IBX data centers, utility costs, including electricity, bandwidth access, IBX data center employees' salaries and benefits, including stock-based compensation, repairs and maintenance, supplies and equipment, and security. A majority of our cost of revenues is fixed in nature and should not vary significantly from period to period, unless we expand our existing IBX data centers or open or acquire new IBX data centers. However, there are certain costs that are considered more variable in nature, including utilities and supplies that are directly related to growth in our existing and new customer base. In addition, the cost of electricity is generally higher in the summer months, as compared to other times of the year. Our costs of electricity may also increase as a result of the physical effects of climate change, global energy supply constraints, increased regulations driving alternative electricity generation due to environmental considerations or as a result of our election to use renewable energy sources. To the extent we incur increased utility costs, such increased costs could materially impact our financial condition, results of operations and cash flows.

Sales and Marketing. Our sales and marketing expenses consist primarily of compensation and related costs for sales and marketing personnel, including stock-based compensation, amortization of contract costs, marketing programs, public relations, promotional materials and travel, as well as bad debt expense and amortization of customer relationship intangible assets.

General and Administrative. Our general and administrative expenses consist primarily of salaries and related expenses, including stock-based compensation, accounting, legal and other professional service fees; and other general corporate expenses, such as our corporate regional headquarters office leases and some depreciation expense on back office systems.

Taxation as a REIT

We elected to be taxed as a real estate investment trust for U.S. federal income tax purposes ("REIT") beginning with our 2015 taxable year. As of December 31, 2022, our REIT structure included all of our data center operations in the U.S., Canada, Mexico, Chile, Japan, Singapore and the majority of our data centers in EMEA. Our data center operations in other jurisdictions are operated as taxable REIT subsidiaries ("TRSs"). We included our share of the assets in xScale joint ventures (with the exception of Korea) in our REIT structure.

As a REIT, we generally are permitted to deduct from our U.S. federal taxable income the dividends we pay to our stockholders. The income represented by such dividends is not subject to U.S. federal income taxes at the entity level but is taxed, if at all, at the stockholder level. Nevertheless, the income of our TRSs which hold our U.S. operations that may not be REIT compliant is subject to U.S. federal and state corporate income taxes, as applicable. Likewise, our foreign subsidiaries continue to be subject to local income taxes in jurisdictions in which they hold assets or conduct operations, regardless of whether held or conducted through TRSs or through qualified REIT subsidiaries ("QRSs"). We are also subject to a separate U.S. federal corporate income tax on any gain recognized from a sale of a REIT asset where our basis in the asset is determined by reference to the basis of the asset in the hands of a C corporation (such as an asset held by us or a QRS following the liquidation or other conversion of a former TRS). This built-in-gains tax is generally applicable to any disposition of such an asset during the five-year period after the date we first owned the asset as a REIT asset to the extent of the built-in-gain based on the fair market value of such asset on the date we first held the asset as a REIT asset. In addition, should we recognize any net gain from "prohibited transactions," we will be subject to tax on this net gain at a 100% rate. "Prohibited transactions," for this purpose, are defined as dispositions, at a gain, of inventory or property held primarily for sale to customers in the ordinary course of a trade or business other than dispositions of foreclosure property and other than dispositions excepted by statutory safe harbors. If we fail to remain qualified for U.S. federal income taxation as a REIT, we will be subject to U.S. federal income taxes at regular corporate income tax rates. Even if we remain qualified for U.S. federal income taxation as a REIT, we may be subject to some federal, state, local and foreign taxes on our income and property in addition to taxes owed with respect to our TRSs' operations. In particular, while state income tax regimes often parallel the U.S. federal income tax regime for REITs, many states do not completely follow federal rules, and some may not follow them at all.

We continue to monitor our REIT compliance in order to maintain our qualification for U.S. federal income taxation as a REIT. For this and other reasons, as necessary, we may convert some of our data center operations in other countries into the REIT structure in future periods.

On each of March 23, June 15, September 21, and December 14, 2022 we paid a quarterly cash dividend of $3.10 per share. We expect the amount of all our applicable quarterly dividend distributions and other applicable distributions to equal or exceed our REIT taxable income that we recognized in 2022.

The Impact of the Ongoing COVID-19 Pandemic on Our Results and Operations

We have continued to closely monitor the impact of the COVID-19 pandemic on our people and business. As of the time of this filing, our offices are open to employees and we have also resumed in-person events as local travel restrictions allow.

For additional details regarding the impacts and risks to our results of operations from the ongoing COVID-19 pandemic, refer to "Results of Operations" section below and Part I, Item 1A. Risk Factors included elsewhere in this Annual Report on Form 10-K.

2022 Highlights:

- In February, we entered into an equity forward amendment to our existing "at the market" equity offering program (the "2020 ATM Program"), under which we could, from time to time, offer and sell shares under the equity distribution agreement pursuant to forward sale transactions (the "Equity Forward Amendment"). See Note 12 within the Consolidated Financial Statements.
- In March, we entered into a joint venture in the form of a limited liability partnership with PGIM to develop and operate additional xScale data centers in Asia-Pacific (the "Asia-Pacific 2 Joint Venture"). See Note 5 within the Consolidated Financial Statements.
- In March, we entered into an agreement to sell the Mexico 3 ("MX3") data center site in connection with the formation of a new joint venture with GIC, to develop and operate xScale data centers in the Americas (the "AMER 1 Joint Venture"). See Note 5 within the Consolidated Financial Statements.
- In April, we completed the acquisition of MainOne Cable Company Ltd. ("MainOne"), consisting of four data centers as well as a subsea cable and terrestrial fiber network. We acquired MainOne and its assets for a total purchase consideration of $278.4 million. See Note 3 within the Consolidated Financial Statements.
- In April, we issued $1.2 billion aggregate principal amount of 3.900% Senior Notes due 2032 (the "2032 Notes"). See Note 11 within the Consolidated Financial Statements.
- In April, we entered into a joint venture in the form of a limited liability partnership with GIC, to develop and operate two xScale data centers in Seoul, Korea (the "Asia-Pacific 3 Joint Venture"). Upon closing, we contributed $17.0 million in exchange for a 20% partnership interest in the joint venture. See Note 6 within the Consolidated Financial Statements.
- In May, we completed the acquisition of four data centers in Chile from Empresa Nacional De Telecomunicaciones S.A. ("Entel") for a total purchase consideration of $638.3 million at the exchange rate in effect on May 2, 2022. See Note 3 within the Consolidated Financial Statements.
- In August, we completed the acquisition of a data center in Peru from Entel for a purchase consideration of $80.3 million at the exchange rate in effect on August 1, 2022. See Note 3 within the Consolidated Financial Statements.
- In August, we settled all five forward sale agreements under the Equity Forward Amendment and sold 579,873 shares of our common stock for approximately $393.6 million, net of payment of commissions to sales agents and other offering expenses, at an aggregate weighted-average forward sale price of $678.72 per share. See Note 12 within the Consolidated Financial Statements.
- In August, we sold an additional 580,833 shares, excluding the forward sale transactions noted above, under the 2020 ATM Program for approximately $403.6 million in proceeds, net of payment of commissions to sales agents and other offering expenses. See Note 12 within the Consolidated Financial Statements.
- In November, we established a successor ATM program (the "2022 ATM Program"), under which we may, from time to time, offer and sell on a spot or forward basis up to an aggregate of $1.5 billion of our common stock to or through sales agents in "at the market" transactions. See Note 12 within the Consolidated Financial Statements.

Results of Operations

Our results of operations for the year ended December 31, 2022 include the results of operations from a data center in Peru acquired from Entel from August 1, 2022, four data centers in Chile acquired from Entel from May 2, 2022, the acquisition of MainOne from April 1, 2022 and two data centers acquired from GPX India from September 1, 2021. See Note 3 within the Consolidated Financial Statements for further details.

In order to provide a framework for assessing our performance excluding the impact of foreign currency fluctuations, we supplement the year-over-year actual change in results of operations with comparative changes on a constant currency basis. Presenting constant currency results of operations is a non-GAAP financial measure. See “Non-GAAP Financial Measures” below for further discussion.

Years ended December 31, 2022 and 2021

Revenues. Our revenues for the years ended December 31, 2022 and 2021 were generated from the following revenue classifications and geographic regions (dollars in thousands):

	Years Ended December 31,				$ Change	% Change	
	2022	%	2021	%	Actual	Actual	Constant Currency
Americas:							
Recurring revenues	$ 3,183,191	44%	$ 2,861,937	43%	$ 321,254	11%	11%
Non-recurring revenues	166,026	2%	159,814	3%	6,212	4%	4%
	3,349,217	46%	3,021,751	46%	327,466	11%	11%
EMEA:							
Recurring revenues	2,207,329	30%	2,001,931	30%	205,398	10%	13%
Non-recurring revenues	135,875	2%	153,285	2%	(17,410)	(11)%	(1)%
	2,343,204	32%	2,155,216	32%	187,988	9%	12%
Asia-Pacific:							
Recurring revenues	1,480,767	21%	1,356,617	21%	124,150	9%	18%
Non-recurring revenues	89,917	1%	101,953	1%	(12,036)	(12)%	(3)%
	1,570,684	22%	1,458,570	22%	112,114	8%	16%
Total:							
Recurring revenues	6,871,287	95%	6,220,485	94%	650,802	10%	13%
Non-recurring revenues	391,818	5%	415,052	6%	(23,234)	(6)%	1%
	$ 7,263,105	100%	$ 6,635,537	100%	$ 627,568	9%	12%

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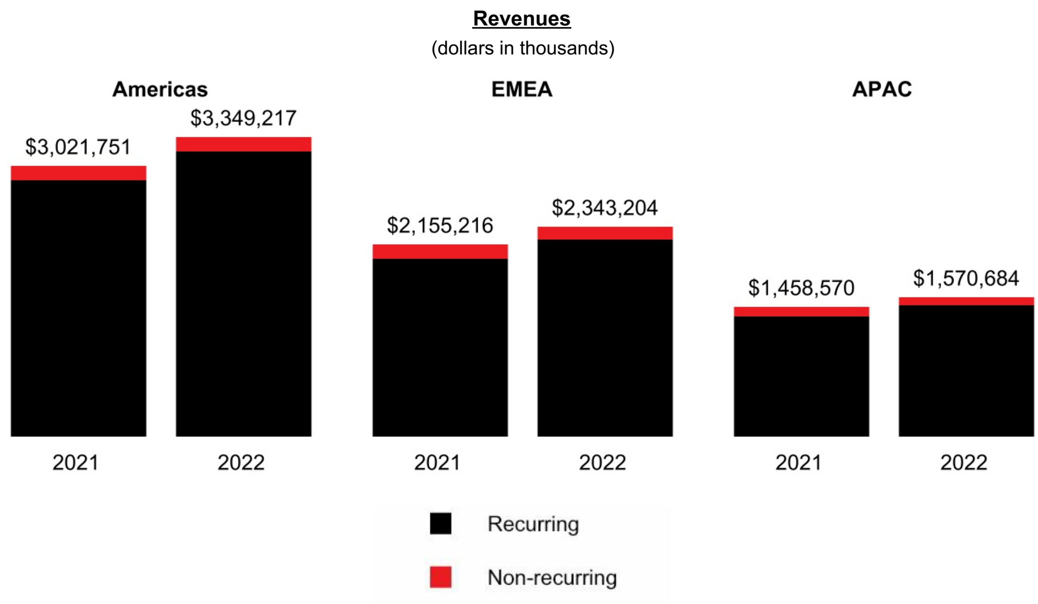


Americas Revenues. During the year ended December 31, 2022, Americas revenue increased by $327.5 million or 11% (and also 11% on a constant currency basis). Growth in Americas revenues was primarily due to:

- approximately $30.3 million of incremental revenues generated from the Entel Chile and Entel Peru acquisitions;
- $44.6 million of incremental revenues generated from our IBX data center expansions; and
- an increase in orders from both our existing customers and new customers during the period.

EMEA Revenues. During the year ended December 31, 2022, EMEA revenue increased by $188.0 million or 9% (12% on a constant currency basis). Growth in EMEA revenues was primarily due to:

- $59.6 million of incremental revenues generated from the MainOne acquisition;
- approximately $32.0 million of incremental revenues generated from our IBX data center expansions;
- $9.3 million of incremental revenues from services provided to our joint ventures; and
- an increase in orders from both our existing customers and new customers during the period.

Asia-Pacific Revenues. During the year ended December 31, 2022, Asia-Pacific revenue increased by $112.1 million or 8% (16% on a constant currency basis). Growth in Asia-Pacific revenues was primarily due to:

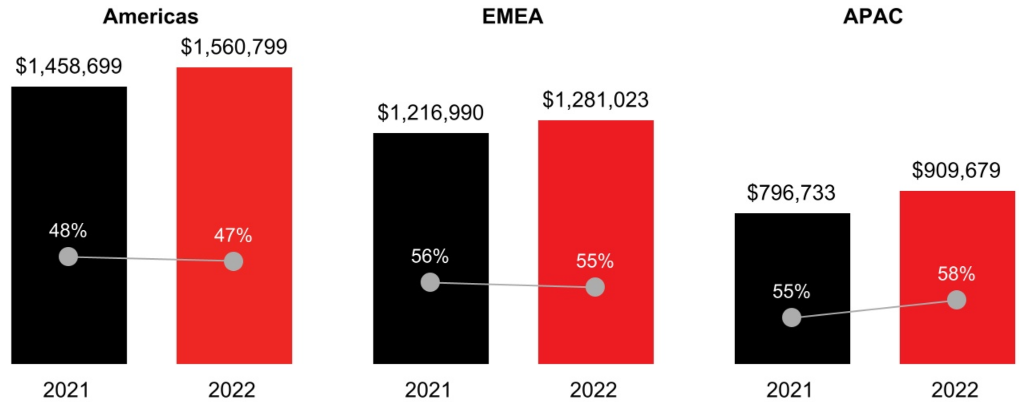
- approximately $60.2 million of incremental revenues generated from our IBX data center expansions;
- $14.3 million incremental revenues generated from the GPX India acquisition; and
- incremental revenues generated from power price increases in Singapore in response to the increased cost of utilities as noted below.

Cost of Revenues. Our cost of revenues for the years ended December 31, 2022 and 2021 were split among the following geographic regions (dollars in thousands):

	Years Ended December 31,				$ Change	% Change	
	2022	%	2021	%	Actual	Actual	Constant Currency
Americas	$ 1,560,799	42%	$ 1,458,699	42%	$ 102,100	7%	7%
EMEA	1,281,023	34%	1,216,990	35%	64,033	5%	11%
Asia-Pacific	909,679	24%	796,733	23%	112,946	14%	24%
Total	$ 3,751,501	100%	$ 3,472,422	100%	$ 279,079	8%	12%

Cost of Revenues

(dollars in thousands; percentages indicate expenses as a percentage of revenues)



Americas Cost of Revenues. During the year ended December 31, 2022, Americas cost of revenues increased by $102.1 million or 7% (and also 7% on a constant currency basis). The increase in our Americas cost of revenues was primarily due to:

- $48.5 million of higher utilities, primarily driven by comparatively lower costs in 2021 resulting from gains recognized from wind farm settlements in Texas and Oklahoma due to extreme weather conditions, current period increases in power costs, higher utility usage and IBX data center expansions;
- $20.1 million of higher compensation costs, including salaries, bonuses and stock-based compensation, primarily due to headcount growth;
- $15.2 million of incremental cost of revenues from the Entel Chile and Entel Peru acquisitions; and
- $10.9 million of higher depreciation expense driven by IBX data center expansions.

EMEA Cost of Revenues. During the year ended December 31, 2022, EMEA cost of revenues increased by $64.0 million or 5% (11% on a constant currency basis). The increase in our EMEA cost of revenues was primarily due to:

- $35.4 million of incremental cost of revenues from the MainOne Acquisition; and
- after accounting for changes in foreign currency rates and hedge loss allocations:
  - approximately $13 million in utilities costs, primarily driven by increases in power costs and higher utility usage in France and the United Kingdom;
  - approximately $11 million in depreciation expense driven by IBX data center expansions; and
  - approximately $7 million in compensation costs, including salaries, bonuses and stock-based compensation, primarily due to headcount growth.

Asia-Pacific Cost of Revenues. During the year ended December 31, 2022, Asia-Pacific cost of revenues increased by $112.9 million or 14% (24% on a constant currency basis). The increase in our Asia-Pacific cost of revenues was primarily due to:

- $99.5 million of higher utilities primarily driven by increases in power cost and higher utility usage in Singapore;
- $11.4 million of incremental cost of revenues from the GPX India acquisition;
- $10.3 million of higher rent and facilities costs, primarily in Hong Kong; and
- $8.1 million of higher depreciation expense driven by IBX data center expansions in Singapore.

This increase was partially offset by $13.6 million of lower other cost of revenue, primarily due to decreased customer installations.

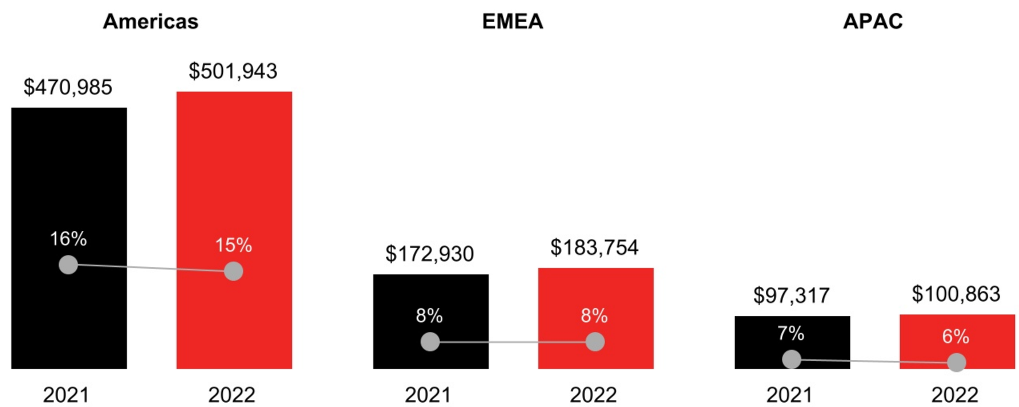
We expect Americas, EMEA and Asia-Pacific cost of revenues to increase in line with the growth of our business, including from the impacts of acquisitions.

Sales and Marketing Expenses. Our sales and marketing expenses for the years ended December 31, 2022 and 2021 were split among the following geographic regions (dollars in thousands):

	Years ended December 31,				$ Change	% Change	
	2022	%	2021	%	Actual	Actual	Constant Currency
Americas	$ 501,943	64%	$ 470,985	64%	$ 30,958	7%	7%
EMEA	183,754	23%	172,930	23%	10,824	6%	11%
Asia-Pacific	100,863	13%	97,317	13%	3,546	4%	11%
Total	$ 786,560	100%	$ 741,232	100%	$ 45,328	6%	8%

Sales and Marketing Expenses

(dollars in thousands; percentages indicate expenses as a percentage of revenues)



Americas Sales and Marketing Expenses. During the year ended December 31, 2022, Americas sales and marketing expenses increased by $31.0 million or 7% (and also 7% on a constant currency basis). The increase in our Americas sales and marketing expenses was primarily due to:

- $18.0 million of higher compensation costs, including sales compensation, salaries and stock-based compensation, partially due to additional compensation expenses incurred related to our recent acquisitions and headcount growth; and
- $8.0 million of higher travel and entertainment expenses due to the easing of COVID-19 travel restrictions.

EMEA Sales and Marketing Expenses. During the year ended December 31, 2022, EMEA sales and marketing increased by $10.8 million or 6% (11% on a constant currency basis). The increase in our EMEA sales and marketing expenses was primarily due to higher compensation costs, including sales compensation, salaries and stock-based compensation, partially due to additional compensation expenses incurred related to our recent acquisitions and headcount growth.

Asia-Pacific Sales and Marketing Expenses. Our Asia-Pacific sales and marketing expense did not materially change during the year ended December 31, 2022 as compared to the year ended December 31, 2021.

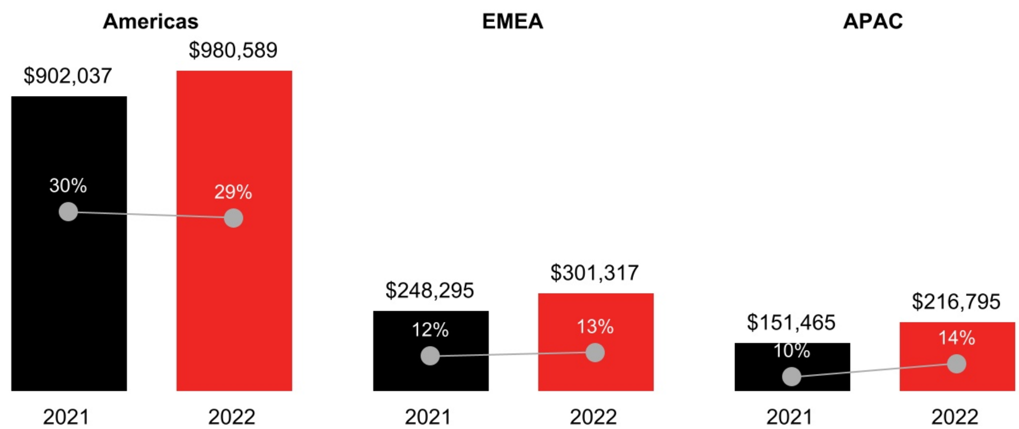
We anticipate that we will continue to invest in sales and marketing initiatives across our three regions in line with the growth of our business. We expect our Americas sales and marketing expenses as a percentage of revenues to be higher than those of our other regions since certain global sales and marketing functions are located within the U.S.

General and Administrative Expenses. Our general and administrative expenses for the years ended December 31, 2022 and 2021 were split among the following geographic regions (dollars in thousands):

	Years Ended December 31,				$ Change	% Change	
	2022	**%**	**2021**	**%**	**Actual**	**Actual**	**Constant Currency**
Americas	$ 980,589	66%	$ 902,037	69%	$ 78,552	9%	9%
EMEA	301,317	20%	248,295	19%	53,022	21%	27%
Asia-Pacific	216,795	14%	151,465	12%	65,330	43%	51%
Total	$ 1,498,701	100%	$ 1,301,797	100%	$ 196,904	15%	17%

General and Administrative Expenses

(dollars in thousands; percentages indicate expenses as a percentage of revenues)



Americas General and Administrative Expenses. During the year ended December 31, 2022, Americas general and administrative expenses increased by $78.6 million or 9% (and also 9% on a constant currency basis). The increase in our Americas general and administrative expenses was primarily due to:

- $46.8 million of higher depreciation expense associated with back-office systems to support the growth of our business;
- $40.7 million of higher compensation costs, including salaries, bonuses, and stock-based compensation, primarily due to additional compensation expenses incurred related to our recent acquisitions and headcount growth;
- $24.0 million of higher office expenses primarily due to additional software and support services; and
- $10.4 million of higher travel and entertainment expenses due to the easing of COVID-19 travel restrictions.

This increase was partially offset by $40.9 million of lower consulting costs driven by an increase in the conversion of contingent workers to full time employees.

EMEA General and Administrative Expenses. During the year ended December 31, 2022, EMEA general and administrative expenses increased by $53.0 million or 21% (27% on a constant currency basis). The increase in our EMEA general and administrative expenses was primarily due to:

- $34.0 million of higher compensation costs, including salaries, bonuses, and stock-based compensation, primarily due to headcount growth; and
- $10.0 million higher travel and entertainment expenses due to the easing of COVID-19 travel restrictions.

Asia-Pacific General and Administrative Expenses. During the year ended December 31, 2022, Asia-Pacific general and administrative expenses increased by $65.3 million or 43% (51% on a constant currency basis). The increase in our Asia-Pacific general and administrative expense was primarily due to:

- $39.5 million of higher compensation costs, including salaries, bonuses, and stock-based compensation, primarily due to headcount growth; and
- $28.5 million of higher consulting costs in support of our business growth and location strategy.

Going forward, although we are carefully monitoring our spending, we expect our general and administrative expenses to increase across all three regions as we continue to invest in our operations to support our growth, including investments to enhance our technology platform, and to integrate recent acquisitions. Additionally, given that our corporate headquarters is located in the U.S., we expect the Americas general and administrative expenses as a percentage of revenues to be higher than that of other regions.

Transaction Costs. During the year ended December 31, 2022, we recorded transaction costs totaling $21.8 million, primarily related to costs incurred in connection with the recent acquisitions and formation of the new joint ventures, see Notes 3, 5, and 6 within the Consolidated Financial Statements. During the year ended December 31, 2021, we recorded transaction costs totaling $22.8 million, primarily related to costs incurred in connection with the formation of the new joint ventures and the GPX India Acquisition.

Gain or Loss on Asset Sales. During the year ended December 31, 2022, we did not record a significant amount of loss on asset sales. During the year ended December 31, 2021, we recorded a gain of $10.8 million primarily related to the sale of the Dublin 5 ("DB5") data center.

Income from Operations. Our income from operations for the years ended December 31, 2022 and 2021 was split among the following geographic regions (dollars in thousands):

	Years Ended December 31,				$ Change	% Change	
	2022	%	2021	%	Actual	Actual	Constant Currency
Americas	$ 283,975	24%	$ 165,380	15%	$ 118,595	72%	71%
EMEA	575,331	48%	530,888	48%	44,443	8%	3%
Asia-Pacific	341,222	28%	411,894	37%	(70,672)	(17)%	(10)%
Total	$ 1,200,528	100%	$ 1,108,162	100%	$ 92,366	8%	8%

Americas Income from Operations. During the year ended December 31, 2022, Americas income from operations increased by $118.6 million or 72% (71% on a constant currency basis), primarily due to higher revenues as a result of our IBX data center expansion activity, the recent acquisitions and organic growth, as described above.

EMEA Income from Operations. During the year ended December 31, 2022, EMEA income from operations increased by $44.4 million or 8% (3% on a constant currency basis), primarily due to higher revenues as a result of our IBX data center expansion activity, the recent acquisition and organic growth, as described above.

Asia-Pacific Income from Operations. During the year ended December 31, 2022, Asia-Pacific income from operations decreased by $70.7 million or 17% (10% on a constant currency basis), primarily due to higher operating expenses as a percentage of revenues, which included higher utility costs, primarily driven by increases in power prices and higher utility usage, as described above.

Interest Income. Interest income was $36.3 million for the year ended December 31, 2022 and was not significant for the year ended December 31, 2021. The average yield for the year ended December 31, 2022 was 1.74% versus 0.17% for the year ended December 31, 2021.

Interest Expense. Interest expense increased to $356.3 million for the year ended December 31, 2022 from $336.1 million for the year ended December 31, 2021, primarily due to the issuance of the 3.900% Senior Notes due 2032. During the years ended December 31, 2022 and 2021, we capitalized $18.2 million and $24.5 million, respectively, of interest expense to construction in progress. See Note 11 within the Consolidated Financial Statements.

Other Expense. We recorded net other expense of $51.4 million for the year ended December 31, 2022, including $49.0 million in stock-based charitable contributions and foreign currency exchange gains and losses. For the year ended December 31, 2021, we recorded net other expense of $50.6 million, primarily due to an approximately $32.0 million impairment charge resulting from the settlement of a pre-acquisition uncertain tax position, refer to the "Income Taxes" section below for further information, as well as foreign currency exchange gains and losses.

Gain or Loss on Debt Extinguishment. We did not record a significant amount of gain on debt extinguishment during the year ended December 31, 2022. During the year ended December 31, 2021, we recorded $115.1 million of net loss on debt extinguishment primarily due to the redemption of 2.875% Euro Senior Notes due 2026 and the 5.375% Senior Notes due 2027.

Income Taxes. We operate as a REIT for U.S. federal income tax purposes. As a REIT, we are generally not subject to U.S. federal income taxes on our taxable income distributed to stockholders. We intend to distribute or have distributed the entire taxable income generated by the operations of our REIT and QRSs for the tax years ended December 31, 2022 and 2021, respectively. As such, other than state income taxes and foreign income and withholding taxes, no provision for income taxes has been included for our REIT and QRSs in the accompanying consolidated financial statements for the years ended December 31, 2022 and 2021.

We have made TRS elections for some of our subsidiaries in and outside the U.S. In general, a TRS may provide services that would otherwise be considered impermissible for REITs to provide and may hold assets that may not be REIT compliant.

U.S. income taxes for the TRS entities located in the U.S. and foreign income taxes for our foreign operations regardless of whether the foreign operations are operated as QRSs or TRSs have been accrued, as necessary, for the years ended December 31, 2022 and 2021.

For the years ended December 31, 2022 and 2021, we recorded $124.8 million and $109.2 million of income tax expenses, respectively. Our effective tax rates were 15.0% and 17.9%, respectively, for the years ended December 31, 2022 and 2021. The lower effective tax rate in 2022 as compared to 2021 is primarily driven by the higher U.S. QRS income that is not subject to U.S. corporate income taxes, partially offset by an increase in valuation allowances in the Americas region.

In the current period, we had a favorable resolution of uncertain tax positions of approximately $40.0 million resulting from the settlement of tax audits in the EMEA region. In the prior period, we had a favorable resolution of uncertain tax positions of approximately $70.0 million resulting from the settlement of various tax audits in the EMEA and Asia-Pacific regions. Of the unrecognized tax benefits realized in the prior period, approximately $32.0 million was related to the uncertain tax position inherited from the acquisition of Metronode in 2018. The uncertain tax position was covered by an indemnification agreement with the Seller. The realization of the unrecognized tax benefits resulted in an impairment of the indemnification asset for the same amount, which was included in Other Income (Expense) on the Consolidated Statements of Operations for the year ended December 31, 2021.

Adjusted EBITDA. Adjusted EBITDA is a key factor in how we assess the operating performance of our segments and develop regional growth strategies such as IBX data center expansion decisions. We define adjusted EBITDA as net income excluding income tax expense, interest income, interest expense, other income or expense, gain or loss on debt extinguishment, depreciation, amortization, accretion, stock-based compensation expense, restructuring charges, impairment charges, transaction costs, and gain or loss on asset sales. See "Non-GAAP Financial Measures" below for more information about adjusted EBITDA and a reconciliation of adjusted EBITDA to net income. Our adjusted EBITDA for the years ended December 31, 2022 and 2021 by geographic regions was as follows (dollars in thousands):

	Years Ended December 31,				$ Change	% Change	
	2022	%	2021	%	Actual	Actual	Constant Currency
Americas	$ 1,521,775	45 %	$ 1,326,460	42 %	$ 195,315	15 %	15 %
EMEA	1,109,502	33 %	1,033,333	33 %	76,169	7 %	10 %
Asia-Pacific	738,423	22 %	784,591	25 %	(46,168)	(6) %	2 %
Total	$ 3,369,700	100 %	$ 3,144,384	100 %	$ 225,316	7 %	10 %

Americas Adjusted EBITDA. During the year ended December 31, 2022, Americas adjusted EBITDA increased by $195.3 million or 15% (and also 15% on a constant currency basis), primarily due to higher revenues as a result of our IBX data center expansion activity, the recent acquisitions and organic growth, as described above.

EMEA Adjusted EBITDA. During the year ended December 31, 2022, EMEA adjusted EBITDA increased by $76.2 million or 7% (10% on a constant currency basis), primarily due to higher revenues as a result of our IBX data center expansion activity, the recent acquisition and organic growth, as described above.

Asia-Pacific Adjusted EBITDA. During the year ended December 31, 2022, Asia-Pacific adjusted EBITDA decreased by $46.2 million or 6% (2% on a constant currency basis), primarily due to higher utility costs, as described above.

Non-GAAP Financial Measures

We provide all information required in accordance with GAAP, but we believe that evaluating our ongoing results of operations may be difficult if limited to reviewing only GAAP financial measures. Accordingly, we use non-GAAP financial measures to evaluate our operations.

Non-GAAP financial measures are not a substitute for financial information prepared in accordance with GAAP. Non-GAAP financial measures should not be considered in isolation, but should be considered together with the most directly comparable GAAP financial measures and the reconciliation of the non-GAAP financial measures to the most directly comparable GAAP financial measures. We have presented such non-GAAP financial measures to provide investors with an additional tool to evaluate our results of operations in a manner that focuses on what management believes to be our core, ongoing business operations. We believe that the inclusion of these non-GAAP financial measures provides consistency and comparability with past reports and provides a better understanding of the overall performance of the business and ability to perform in subsequent periods. We believe that if we did not provide such non-GAAP financial information, investors would not have all the necessary data to analyze us effectively.

Investors should note that the non-GAAP financial measures used by us may not be the same non-GAAP financial measures, and may not be calculated in the same manner, as those of other companies. Investors should therefore exercise caution when comparing non-GAAP financial measures used by us to similarly titled non-GAAP financial measures of other companies.

Our primary non-GAAP financial measures, adjusted EBITDA and adjusted funds from operations ("AFFO"), exclude depreciation expense as these charges primarily relate to the initial construction costs of our IBX data centers and do not reflect our current or future cash spending levels to support our business. Our IBX data centers are long-lived assets and have an economic life greater than 10 years. The construction costs of an IBX data center do not recur with respect to such data center, although we may incur initial construction costs in future periods with respect to additional IBX data centers, and future capital expenditures remain minor relative to our initial investment. This is a trend we expect to continue. In addition, depreciation is also based on the estimated useful lives of our IBX data centers. These estimates could vary from actual performance of the asset, are based on historical costs incurred to build out our IBX data centers and are not indicative of current or expected future capital expenditures. Therefore, we exclude depreciation from our results of operations when evaluating our operations.

In addition, in presenting adjusted EBITDA and AFFO, we exclude amortization expense related to acquired intangible assets. Amortization expense is significantly affected by the timing and magnitude of our acquisitions and these charges may vary in amount from period to period. We exclude amortization expense to facilitate a more meaningful evaluation of our current operating performance and comparisons to our prior periods. We exclude accretion expense, both as it relates to asset retirement obligations as well as accrued restructuring charge liabilities, as these expenses represent costs which we believe are not meaningful in evaluating our current operations. We also exclude restructuring charges. Restructuring charges relate to our decisions to exit leases for excess space adjacent to several of our IBX data centers, which we did not intend to build out, or our decision to reverse such restructuring charges. We also exclude impairment charges generally related to certain long-lived assets. The impairment charges are related to expense recognized whenever events or changes in circumstances indicate that the carrying amount of assets are not recoverable. We also exclude gain or loss on asset sales as it represents profit or loss that is not meaningful in evaluating the current or future operating performance. Additionally, we exclude transaction costs from AFFO and adjusted EBITDA to allow more comparable comparisons of our financial results to our historical operations. The transaction costs relate to costs we incur in connection with business combinations and the formation of joint ventures, including advisory, legal, accounting, valuation, and other professional or consulting fees. Such charges generally are not relevant to assessing our long-term performance. In addition, the frequency and amount of such charges vary significantly based on the size and timing of the transactions. Management believes items such as restructuring charges, impairment charges, gain or loss on asset sales and transaction costs are non-core transactions; however, these types of costs may occur in future periods. Finally, we exclude stock-based compensation expense, as it can vary significantly from period to period based on share price, and the timing, size and nature of equity awards. As such, we, and many investors and analysts, exclude stock-based compensation expense to compare our results of operations with those of other companies.

Adjusted EBITDA

We define adjusted EBITDA as net income excluding income tax expense, interest income, interest expense, other income or expense, gain or loss on debt extinguishment, depreciation, amortization, accretion, stock-based compensation expense, restructuring charges, impairment charges, transaction costs, and gain or loss on asset sales as presented below (in thousands):

	Years Ended December 31,		
	2022	**2021**	**2020**
Net income	$ 704,577	$ 499,728	$ 370,074
Income tax expense	124,792	109,224	146,151
Interest income	(36,268)	(2,644)	(8,654)
Interest expense	356,337	336,082	406,466
Other (income) expense	51,417	50,647	(6,913)
(Gain) loss on debt extinguishment	(327)	115,125	145,804
Depreciation, amortization, and accretion expense	1,739,374	1,660,524	1,427,010
Stock-based compensation expense	403,983	363,774	311,020
Transaction costs	21,839	22,769	55,935
Impairment charges	—	—	7,306
(Gain) loss on asset sales	3,976	(10,845)	(1,301)
Adjusted EBITDA	$ 3,369,700	$ 3,144,384	$ 2,852,898

Our adjusted EBITDA results have increased each year in total dollars due to the increase in our operating results, as discussed in "Results of Operations", as well as the nature of our business model consisting of a recurring revenue stream and a cost structure which has a large base that is fixed in nature, as also discussed in "Overview".

Funds from Operations ("FFO") and AFFO

We use FFO and AFFO, which are non-GAAP financial measures commonly used in the REIT industry. FFO is calculated in accordance with the standards established by the National Association of Real Estate Investment Trusts. FFO represents net income (loss), excluding gain (loss) from the disposition of real estate assets, depreciation and amortization on real estate assets and adjustments for unconsolidated joint ventures' and non-controlling interests' share of these items.

In presenting AFFO, we exclude certain items that we believe are not good indicators of our current or future operating performance. AFFO represents FFO excluding depreciation and amortization expense on non-real estate assets, accretion, stock-based compensation, stock-based charitable contributions, restructuring charges, impairment charges, transaction costs, an installation revenue adjustment, a straight-line rent expense adjustment, a contract cost adjustment, amortization of deferred financing costs and debt discounts and premiums, gain (loss) on debt extinguishment, an income tax expense adjustment, recurring capital expenditures, net income (loss) from discontinued operations, net of tax, and adjustments from FFO to AFFO for unconsolidated joint ventures' and noncontrolling interests' share of these items. The adjustments for installation revenue, straight-line rent expense and contract costs are intended to isolate the cash activity included within the straight-lined or amortized results in the consolidated statement of operations. We exclude the amortization of deferred financing costs and debt discounts and premiums as these expenses relate to the initial costs incurred in connection with debt financings that have no current or future cash obligations. We exclude gain (loss) on debt extinguishment since it generally represents the write-off of initial costs incurred in connection with debt financings or a cost that is incurred to reduce future interest costs and is not a good indicator of our current or future operating performance. We include an income tax expense adjustment, which represents the non-cash tax impact due to changes in valuation allowances, uncertain tax positions and deferred taxes that do not relate to current period's operations. We deduct recurring capital expenditures, which represent expenditures to extend the useful life of its IBX data centers or other assets that are required to support current revenues. We also exclude net income (loss) from discontinued operations, net of tax, which represents results that may not recur and are not a good indicator of our current future operating performance.

Our FFO and AFFO were as follows (in thousands):

	Years Ended December 31, 2022	2021	2020
Net income	$ 704,577	$ 499,728	$ 370,074
Net (income) loss attributable to non-controlling interests	(232)	463	(297)
Net income attributable to Equinix	704,345	500,191	369,777
Adjustments:			
Real estate depreciation	1,104,787	1,073,148	924,064
(Gain) loss on disposition of real estate property	7,134	(6,439)	4,063
Adjustments for FFO from unconsolidated joint ventures	10,068	6,097	2,726
FFO attributable to common shareholders	$ 1,826,334	$ 1,572,997	$ 1,300,630

	Years Ended December 31, 2022	2021	2020
FFO attributable to common shareholders	$ 1,826,334	$ 1,572,997	$ 1,300,630
Adjustments:			
Installation revenue adjustment	17,745	27,928	(125)
Straight-line rent expense adjustment	16,263	9,677	10,787
Contract cost adjustment	(52,888)	(63,064)	(35,675)
Amortization of deferred financing costs and debt discounts and premiums	17,826	17,135	15,739
Stock-based compensation expense	403,983	363,774	311,020
Stock-based charitable contributions	49,013	—	—
Non-real estate depreciation expense	426,666	377,658	300,258
Amortization expense	204,755	205,484	199,047
Accretion expense adjustment	3,166	4,234	3,641
Recurring capital expenditures	(188,885)	(199,089)	(160,637)
(Gain) loss on debt extinguishment	(327)	115,125	145,804
Transaction costs	21,839	22,769	55,935
Impairment charges[1]	1,815	31,847	7,306
Income tax expense (benefit) adjustment [1]	(31,165)	(38,505)	33,220
Adjustments for AFFO from unconsolidated joint ventures	(2,262)	3,259	2,195
AFFO attributable to common shareholders	$ 2,713,878	$ 2,451,229	$ 2,189,145

(1) Impairment charges in 2022 and 2021 relate to the impairment of an indemnification asset resulting from the settlement of a pre-acquisition uncertain tax position, which was recorded as Other Income (Expense) on the Consolidated Statements of Operations. This impairment charge was offset by the recognition of tax benefits in the same amount, which was included within the Income tax expense (benefit) adjustment line on the table above.

Our AFFO results have improved due to the improved operating results discussed earlier in "Results of Operations," as well as due to the nature of our business model which consists of a recurring revenue stream and a cost structure which has a large base that is fixed in nature as discussed earlier in "Overview."

Constant Currency Presentation

Our revenues and certain operating expenses (cost of revenues, sales and marketing and general and administrative expenses) from our international operations have represented and will continue to represent a significant portion of our total revenues and certain operating expenses. As a result, our revenues and certain operating expenses have been and will continue to be affected by changes in the U.S. dollar against major international currencies. During the year ended December 31, 2022 as compared to the same period in 2021, the U.S. dollar was stronger relative to the Australian dollar, British Pound, Euro, Japanese yen and Singapore dollar, which resulted in an unfavorable foreign currency impact on revenue, operating income and adjusted EBITDA, and a favorable foreign currency impact on operating expenses. During the year ended December 31, 2022 as compared to the same period in 2021, the U.S. dollar was weaker relative to the Brazilian real, which resulted in a favorable foreign currency impact on revenue, operating income and adjusted EBITDA, and an unfavorable foreign currency impact on operating expenses. In order to provide a framework for assessing how each of our business segments performed excluding the impact of foreign currency fluctuations, we present period-over-period percentage changes in our revenues and certain operating expenses on a constant currency basis in addition to the historical amounts as reported. Our constant currency presentation excludes the impact of our foreign currency cash flow hedging activities. Presenting constant currency results of operations is a non-GAAP financial measure and is not meant to be considered in isolation or as an alternative to GAAP results of operations. However, we have presented this non-GAAP financial measure to provide investors with an additional tool to evaluate our results of operations. To present this information, our current period revenues and certain operating expenses from entities reporting in currencies other than the U.S. dollar are converted into U.S. dollars at constant exchange rates rather than the actual exchange rates in effect during the respective periods (i.e. average rates in effect for the year ended December 31, 2021 are used as exchange rates for the year ended December 31, 2022 when comparing the year ended December 31, 2022 with the year ended December 31, 2021).

Liquidity and Capital Resources

Sources and Uses of Cash

Customer collections are our primary source of cash. We believe we have a strong customer base, and have continued to experience relatively strong collections. As of December 31, 2022, our principle sources of liquidity were $1.9 billion of cash and cash equivalents. In addition to our cash balance, we had $3.9 billion of additional liquidity available to us from our $4.0 billion revolving facility and general access to both public and private debt and the equity capital markets. We also have additional liquidity available to us from our 2022 ATM program, under which we may offer and sell from time to time our common stock in "at the market" transactions on either a spot or forward basis. As of December 31, 2022, we had $1.4 billion available for sale under the 2022 ATM Program.

We believe we have sufficient cash, coupled with anticipated cash generated from operating activities and external financing sources, to meet our operating requirements, including repayment of the current portion of our debt as it becomes due, distribution of dividends, completion of our publicly-announced acquisitions, ordinary costs to operate the business, and expansion projects.

As we continue to grow, we may pursue additional expansion opportunities, primarily the build out of new IBX data centers, in certain of our existing markets which are at or near capacity within the next year, as well as potential acquisitions and joint ventures. If the opportunity to expand is greater than planned we may further increase the level of capital expenditure to support this growth as well as pursue additional business and real estate acquisitions or joint ventures provided that we have or can access sufficient funding to pursue such expansion opportunities. We may elect to access the equity or debt markets from time to time opportunistically, particularly if financing is available on attractive terms. We will continue to evaluate our operating requirements and financial resources in light of future developments.

Cash Flow

	Years Ended December 31,		
	2022	2021	Change
		(in thousands)	
Net cash provided by operating activities	$ 2,963,182	$ 2,547,206	$ 415,976
Net cash used in investing activities	(3,362,953)	(3,006,738)	(356,215)
Net cash provided by financing activities	856,766	413,765	443,001

Operating Activities

Our cash provided by our operations is generated by colocation, interconnection, managed infrastructure and other revenues. Our primary uses of cash from our operating activities include compensation and related costs, interest payments, other general corporate expenditures and taxes. Net cash provided by operating activities increased by $416.0 million during the year ended December 31, 2022 as compared to December 31, 2021, primarily driven by improved results of operations partially offset by increases in cash paid for costs and operating expenses.

Investing Activities

Net cash used in investing activities increased by $356.2 million during the year ended December 31, 2022 as compared to December 31, 2021, primarily due to an increase of $805.5 million spent on the Entel Chile and Peru data center acquisitions and the MainOne acquisition, an increase of $46.4 million spent on real estate acquisitions and a $37.1 million increase in purchases of investments. This increase was partially offset by a $473.5 million decrease in capital expenditures, a $41.3 million increase in the proceeds from the sale of assets to our xScale Joint Ventures and an $18.0 million increase in proceeds from the sale of investments.

Financing Activities

Net cash provided by financing activities increased by $443.0 million for the year ended December 31, 2022 as compared to December 31, 2021, primarily driven by a $2.0 billion decrease in the repayment of senior notes, a $676.9 million increase in proceeds from term loan facilities, a $298.1 million increase in proceeds from the ATM program, a $129.1 million decrease in the repayment of mortgage and loans payable, a $99.2 million decrease in debt extinguishment costs, a $31.3 million decrease in repayments of finance lease liabilities, a $7.4 million decrease in debt issuance costs and a $3.9 million increase in proceeds from employee awards. This increase is partially offset by a $2.7 billion decrease in proceeds from senior notes and a $108.6 million increase in dividend distributions.

Material Cash Commitments

As of December 31, 2022, our principle commitments were primarily comprised of:

- approximately $12.2 billion of principal from our senior notes (gross of debt issuance cost and debt d iscount);
- approximately $3.0 billion of interest on mortgage payable, loans payable, senior notes and term loans, based on their respective interest rates and recognized over the life of these instruments, and the credit facility fee for the revolving credit facility;
- $653.6 million of principal from our term loans, mortgage and loans payable (gross of debt issuance cost, debt discount, plus mortgage premium);
- approximately $5.4 billion of total lease payments, which represents lease payments under finance and operating lease arrangements, including renewal options that are reasonably certain to be exercised;
- approximately $1.6 billion of unaccrued capital expenditure contractual commitments, primarily for IBX equipment not yet delivered and labor not yet provided in connection with the work necessary to complete construction and open IBX data center expansion projects prior to making them available to customers for installation, the majority of which is payable within the next 12 months; and
- approximately $1.8 billion of other non-capital purchase commitments, such as commitments to purchase power in select locations and other open purchase orders, which contractually bind us for goods, services

or arrangements to be delivered or provided during 2023 and beyond, the majority of which is payable within the next two years.

We believe that our sources of liquidity, including our expected future operating cash flows, are sized to adequately meet both the near and long term material cash commitments for the foreseeable future. For further information on maturities of lease liabilities and debt instruments, see Notes 10 and 11, respectively, within the Consolidated Financial Statements.

Other Contractual Obligations

We have additional future equity contributions and commitments to the joint ventures with GIC and PGIM. For additional information, see the "Equity Method Investments" footnote within the Consolidated Financial Statements.

Additionally, we entered into lease agreements with various landlords primarily for data center spaces and ground leases which have not yet commenced as of December 31, 2022. For additional information, see “Maturities of Lease Liabilities” in Note 10 within the Consolidated Financial Statements.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with U.S. GAAP. The preparation of our financial statements requires management to make estimates and assumptions about future events that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, management evaluates the accounting policies, assumptions, estimates and judgments to ensure that our consolidated financial statements are presented fairly and in accordance with GAAP. Management bases its assumptions, estimates and judgments on historical experience, current trends and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. However, because future events and their effects cannot be determined with certainty, actual results may differ from these assumptions and estimates, and such differences could be material.

Our significant accounting policies are discussed in Note 1 to Consolidated Financial Statements in Item 8 of this Annual Report on Form 10-K. Management believes that the following accounting policies and estimates are the most critical to aid in fully understanding and evaluating our consolidated financial statements, and they require significant judgments, resulting from the need to make estimates about the effect of matters that are inherently uncertain:

- Accounting for income taxes;
- Accounting for business combinations;
- Accounting for impairment of goodwill and other intangible assets;
- Accounting for property, plant and equipment; and
- Accounting for leases.

Description	Judgments and Uncertainties	Effect if Actual Results Differ from Assumptions
Accounting for Income Taxes. Deferred tax assets and liabilities are recognized based on the future tax consequences attributable to temporary differences that exist between the financial statement carrying value of assets and liabilities and their respective tax bases, as well as tax attributes such as operating loss, capital loss and tax credit carryforwards on a taxing jurisdiction basis. We measure deferred tax assets and liabilities using enacted tax rates that will apply in the years in which we expect the temporary differences to be recovered or settled. The accounting standard for income taxes requires a reduction of the carrying amounts of deferred tax assets by recording a valuation allowance if, based on the available evidence, it is more likely than not (defined by the accounting standard as a likelihood of more than 50%) that such assets will not be realized. A tax benefit from an uncertain income tax position may be recognized in the financial statements only if it is more likely than not that the position is sustainable, based solely on its technical merits and consideration of the relevant taxing authority's widely understood administrative practices and precedents. We recognize interest and penalties related to unrecognized tax benefits within income tax benefit (expense) in the consolidated statements of operations.	The valuation of deferred tax assets requires judgment in assessing the likely future tax consequences of events that have been recognized in our financial statements or tax returns. Our accounting for deferred tax consequences represents our best estimate of those future tax consequences. In assessing the need for a valuation allowance, we consider both positive and negative evidence related to the likelihood of realization of the deferred tax assets. If, based on the weight of that available evidence, it is more likely than not the deferred tax assets will not be realized, we record a valuation allowance. The weight given to the positive and negative evidence is commensurate with the extent to which the evidence may be objectively verified. This assessment, which is completed on a taxing jurisdiction basis, takes into account a number of types of evidence, including the following: 1) the nature, frequency and severity of current and cumulative financial reporting losses, 2) sources of future taxable income, 3) taxable income in carryback years permitted by the tax law, and 4) tax planning strategies. In assessing the tax benefit from an uncertain income tax position, the tax position that meets the more-likely-than-not recognition threshold is initially and subsequently measured as the largest amount of tax benefit that is greater than a 50% likelihood of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For purposes of the quarterly REIT asset tests, we estimate the fair market value of assets within our QRSs and TRSs using a discounted cash flow approach, by calculating the present value of forecasted future cash flows. We apply discount rates based on industry benchmarks relative to the market and forecasting risks. Other significant assumptions used to estimate the fair market value of assets in QRSs and TRSs include projected revenue growth, projected operating margins and projected capital expenditure. We revisit significant assumptions periodically to reflect any changes due to business or economic environment.	As of December 31, 2022 and 2021, we had net total deferred tax liabilities of $338.7 million and $280.5 million, respectively. As of December 31, 2022 and 2021, we had a total valuation allowance of $166.6 million and $100.7 million, respectively. If and when we increase or reduce our valuation allowances, it may have an unfavorable or favorable impact, respectively, to our financial position and results of operations in the periods when such determinations are made. We will continue to assess the need for our valuation allowances, by jurisdiction, in the future. During the year ended December 31, 2022, we established full valuation allowances against certain deferred tax assets in the Americas and EMEA regions, either as the assessment of the realization of such deferred tax assets or as part of the purchase accounting determination for the businesses we acquired during the year. We do not expect these deferred tax assets to be realizable in the foreseeable future. During the year ended December 31, 2021, we established full valuation allowances against certain deferred tax assets in the Americas and Asia-Pacific regions, as these deferred tax assets are not expected to be realizable in the foreseeable future. As of December 31, 2022 and 2021, we had unrecognized tax benefits of $89.2 million and $148.3 million, respectively, exclusive of interest and penalties. During the year ended December 31, 2022, the unrecognized tax benefit decreased by $59.1 million primarily due to the settlements of tax audits in the EMEA region. During the year ended December 31, 2021, the unrecognized tax benefit decreased by $59.5 million primarily due to the settlements of various tax audits in the EMEA and Asia-Pacific regions. The unrecognized tax benefits of $89.2 million as of December 31, 2022, if subsequently recognized, will affect our effective tax rate favorably at the time when such a benefit is recognized.

Description	Judgments and Uncertainties	Effect if Actual Results Differ from Assumptions
Accounting for Business Combinations In accordance with the accounting standard for business combinations, we allocate the purchase price of an acquired business to its identifiable assets and liabilities based on estimated fair values. The excess of the purchase price over the fair value of the assets acquired and liabilities assumed, if any, is recorded as goodwill. We use all available information to estimate fair values. We typically engage outside appraisal firms to assist in determining the fair value of identifiable intangible assets such as customer contracts, leases and any other significant assets or liabilities and contingent consideration, as well as the estimated useful life of intangible assets. We adjust the preliminary purchase price allocation, as necessary, up to one year after the acquisition closing date if we obtain more information regarding asset valuations and liabilities assumed.	Our purchase price allocation methodology contains uncertainties because it requires assumptions and management's judgment to estimate the fair value of assets acquired and liabilities assumed at the acquisition date. Key judgments used to estimate the fair value of intangible assets include projected revenue growth and operating margins, discount rates, customer attrition rates, as well as the estimated useful life of intangible assets. Management estimates the fair value of assets and liabilities based upon quoted market prices, the carrying value of the acquired assets and widely accepted valuation techniques, including discounted cash flows and market multiple analyses. Our estimates are inherently uncertain and subject to refinement. Unanticipated events or circumstances may occur which could affect the accuracy of our fair value estimates, including assumptions regarding industry economic factors and business strategies.	During the last three years, we have completed a number of business combinations, including the acquisition of Entel Peru data centers in the third quarter of 2022, MainOne in West Africa and Entel Chile data centers, both in the second quarter of 2022, GPX in India in the third quarter of 2021, Bell data centers in Canada in the fourth quarter of 2020, Packet in March 2020 and Axtel in Mexico in January 2020. The purchase price allocation for these acquisitions has been finalized, except for the MainOne, Entel Peru and Entel Chile acquisitions. As of both December 31, 2022 and 2021, we had net intangible assets of $1.9 billion, respectively. We recorded amortization expense for intangible assets of $204.8 million, $205.5 million and $199.0 million for the years ended December 31, 2022, 2021 and 2020, respectively. We do not believe there is a reasonable likelihood that there will be a material change in the estimates or assumptions we used to complete the purchase price allocations and the fair value of assets acquired and liabilities assumed. However, if actual results are not consistent with our estimates or assumptions, we may be exposed to losses or gains that could be material, which would be recorded in our consolidated statements of operations in 2022 or beyond.

Description	Judgments and Uncertainties	Effect if Actual Results Differ from Assumptions
Accounting for Impairment of Goodwill and Other Intangible Assets		
In accordance with the accounting standard for goodwill and other intangible assets, we perform goodwill and other intangible assets impairment reviews annually, or whenever events or changes in circumstances indicate that the carrying value of an asset may not be recoverable. We complete the annual goodwill impairment assessment for the Americas, EMEA and Asia-Pacific reporting units to determine if the fair values of the reporting units exceeded their carrying values. We perform a review of other intangible assets for impairment by assessing events or changes in circumstances that indicate the carrying amount of an asset may not be recoverable.	To perform annual goodwill impairment assessment, we elected to assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. This analysis requires assumptions and estimates before performing the quantitative goodwill impairment test, where the assessment requires assumptions and estimates derived from a review of our actual and forecasted operating results, approved business plans, future economic conditions and other market data. Additionally, we periodically review our assessment of our reporting units to determine if changes in facts and circumstances warrant changes to our conclusions. There were no specific factors present in 2022 or 2021 that indicated a potential goodwill impairment. We performed our annual review of other intangible assets by assessing if there were events or changes in circumstances indicating that the carrying amount of an asset may not be recoverable, such as a significant decrease in market price of an asset, a significant adverse change in the extent or manner in which an asset is being used, a significant adverse change in legal factors or business climate that could affect the value of an asset or a continuous deterioration of our financial condition. This assessment requires assumptions and estimates derived from a review of our actual and forecasted operating results, approved business plans, future economic conditions and other market data. There were no specific events in 2022 or 2021 that indicated a potential impairment.	As of December 31, 2022, goodwill attributable to the Americas, the EMEA and the Asia-Pacific reporting units was $2.6 billion, $2.4 billion and $0.6 billion, respectively. Future events, changing market conditions and any changes in key assumptions may result in an impairment charge. While we have not recorded an impairment charge against our goodwill to date, the development of adverse business conditions in our Americas, EMEA or Asia-Pacific reporting units, such as higher than anticipated customer churn or significantly increased operating costs, or significant deterioration of our market comparables that we use in the market approach, could result in an impairment charge in future periods. The balance of our other intangible assets, net, for both years ended December 31, 2022 and 2021 was $1.9 billion. While we have not recorded an impairment charge against our other intangible assets to date, future events or changes in circumstances, such as a significant decrease in market price of an asset, a significant adverse change in the extent or manner in which an asset is being used, a significant adverse change in legal factors or business climate, may result in an impairment charge in future periods.

Description	Judgments and Uncertainties	Effect if Actual Results Differ from Assumptions
Accounting for Property, Plant and Equipment We have a substantial amount of property, plant and equipment recorded on our consolidated balance sheet. The vast majority of our property, plant and equipment represent the costs incurred to build out or acquire our IBX data centers. Our IBX data centers are long-lived assets. We depreciate our property, plant and equipment using the straight-line method over the estimated useful lives of the respective assets (subject to the term of the lease in the case of leased assets or leasehold improvements and integral equipment located in leased properties). Accounting for property, plant and equipment includes determining the appropriate period in which to depreciate such assets, assessing such assets for potential impairment, capitalizing interest during periods of construction and assessing the asset retirement obligations required for certain leased properties that require us to return the leased properties back to their original condition at the time we decide to exit a leased property.	Judgments are required in arriving at the estimated useful life of an asset and changes to these estimates would have significant impact on our financial position and results of operations. When we lease a property for our IBX data centers, we generally enter into long-term arrangements with renewal options generally available to us. In the next several years, a number of leases for our IBX data centers will come up for renewal. As we start approaching the end of these initial lease terms, we will need to reassess the estimated useful lives of our property, plant and equipment. In addition, we may find that our estimates for the useful lives of non-leased assets may also need to be revised periodically. We periodically review the estimated useful lives of certain of our property, plant and equipment and changes in these estimates in the future are possible. The assessment of long-lived assets for impairment requires assumptions and estimates of undiscounted and discounted future cash flows. These assumptions and estimates require significant judgment and are inherently uncertain.	As of December 31, 2022 and 2021, we had property, plant and equipment of $16.6 billion and $15.4 billion, respectively. During the years ended December 31, 2022, 2021 and 2020, we recorded depreciation expense of $1.5 billion, $1.5 billion, and $1.2 billion, respectively. While we evaluated the appropriateness, we did not revise the estimated useful lives of our property, plant and equipment during the years ended December 31, 2022, 2021 and 2020. Further changes in our estimated useful lives of our property, plant and equipment could have a significant impact on our results of operations.
Accounting for Leases A significant portion of our data center spaces, office spaces and equipment are leased. Each time we enter into a new lease or lease amendments, we analyze each lease or lease amendment for the proper accounting, including determining if an arrangement is or contains a lease at inception and making assessment of the leased properties to determine if they are operating or finance leases.	Determination of accounting treatment, including the result of the lease classification test for each new lease or lease amendment, is dependent on a variety of judgments, such as identification of lease and non-lease components, allocation of total consideration between lease and non-lease components, determination of lease term, including assessing the likelihood of lease renewals, valuation of leased property, and establishing the incremental borrowing rate to calculate the present value of the minimum lease payment for the lease test. The judgments used in the accounting for leases are inherently subjective; different assumptions or estimates could result in different accounting treatment for a lease.	Lease assumptions and estimates are determined and applied at the inception of the leases or at the lease modification date. As of December 31, 2022 and 2021, operating right-of-use ("ROU") lease assets were at $1.4 billion and $1.3 billion, respectively, and operating lease liabilities were at $1.4 billion and $1.3 billion respectively. As of December 31, 2022 and 2021, finance ROU assets were $2.0 billion and $1.9 billion, respectively, and finance lease liabilities were $2.3 billion and $2.1 billion, respectively. For the years ended December 31, 2022, 2021 and 2020, we recorded the finance lease cost of $273.6 million, $275.0 million and $233.9 million , respectively, and recorded rent expense of approximately $213.6 million, $221.8 million and $217.3 million, respectively.

Recent Accounting Pronouncements

See "Recent Accounting Pronouncements" in Note 1 within the Consolidated Financial Statements.

ITEM 7A. Quantitative and Qualitative Disclosures About Market Risk

Market Risk

The following discussion about market risk involves forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements. We may be exposed to market risks related to changes in interest rates and foreign currency exchange rates and fluctuations in the prices of certain commodities, primarily electricity.

We employ foreign currency forward and option contracts, cross-currency interest rate swaps and interest rate locks for the purpose of hedging certain specifically identified exposures. The use of these financial instruments is intended to mitigate some of the risks associated with fluctuations in currency exchange and interest rates, but does not eliminate such risks. We do not use financial instruments for trading or speculative purposes.

Investment Portfolio Risk

We maintain an investment portfolio of various holdings, types, and maturities that is prioritized on meeting REIT asset requirements. All of our marketable securities are recorded on our consolidated balance sheets at fair value with changes in fair values recognized in net income. We consider various factors in determining whether we should recognize an impairment charge for our securities, including the length of time and extent to which the fair value has been less than our cost basis and our intent and ability to hold the investment for a period of time sufficient to allow for any anticipated recovery. We anticipate that we will recover the entire cost basis of these securities and have determined that no other-than-temporary impairments associated with credit losses were required to be recognized during the year ended December 31, 2022.

As of December 31, 2022, our investment portfolio of cash equivalents and marketable securities consisted of money market funds. The amount in our investment portfolio that could be susceptible to market risk totaled $764.6 million.

Interest Rate Risk

We are exposed to interest rate risk related to our outstanding debt. An immediate increase or decrease in current interest rates from their position as of December 31, 2022 would not have a material impact on our interest expense due to the fixed coupon rate on the majority of our debt obligations. However, the interest expense associated with our senior credit facility and term loans that bear interest at variable rates could be affected. For every 100-basis point increase or decrease in interest rates, our annual interest expense could increase by approximately $6.1 million or decrease by approximately $6.1 million based on the total balance of our term loan borrowings as of December 31, 2022.

We periodically enter into interest rate locks to hedge the interest rate exposure created by anticipated fixed rate debt issuances, which are designated as cash flow hedges. When interest rate locks are settled, any accumulated gain or loss included as a component of other comprehensive income (loss) will be amortized to interest expense over the term of the forecasted hedged transaction which is equivalent to the term of the interest rate locks. We also use cross-currency swaps to hedge our interest rate risk in our variable rate debt obligations by changing the benchmark rate for a portion of the variable rate debt obligations from SONIA to SOFR. As of December 31, 2022, the total notional amount of such cross-currency interest rate swaps was $280.3 million.

The fair value of our long-term fixed interest rate debt is subject to interest rate risk. Generally, the fair value of fixed interest rate debt will increase as interest rates fall and decrease as interest rates rise. These interest rate changes may affect the fair value of the fixed interest rate debt but do not impact our earnings or cash flows. The fair value of our mortgage and loans payable, which are not traded in the market, is estimated by considering our credit rating, current rates available to us for debt of the same remaining maturities and the terms of the debt. The fair value of our other senior notes, which are traded in the market, was based on quoted market prices. The following table represents the carrying value and estimated fair value of our mortgage and loans payable and senior notes as of (in thousands):

	December 31, 2022		December 31, 2021	
	Carrying Value [1]	Fair Value	Carrying Value [1]	Fair Value
Mortgage and loans payable	$ 653,617	$ 666,387	$ 618,388	$ 621,051
Senior notes	12,226,890	10,196,933	11,102,130	11,049,834

(1) The carrying value is gross of debt issuance cost, debt discount and debt premium.

Foreign Currency Risk

To help manage the exposure to foreign currency exchange rate fluctuations, we have implemented a number of hedging programs, in particular (i) a cash flow hedging program to hedge the forecasted revenues and expenses in our EMEA region as well as our debt denominated in foreign-currencies, (ii) a balance sheet hedging program to hedge the re-measurement of monetary assets and liabilities denominated in foreign currencies, and (iii) a net investment hedging program to hedge the long term investments in our foreign subsidiaries. Our hedging programs reduce, but do not entirely eliminate, the impact of currency exchange rate movements and their impact on the consolidated statements of operations.

We have entered into various foreign currency debt obligations. As of December 31, 2022, the total principal amount of foreign currency debt obligations was $1.8 billion, including $1.2 billion denominated in Euro and $603.9 million denominated in British Pound. As of December 31, 2022, we have designated $1.5 billion of the total principal amount of foreign currency debt obligations as net investment hedges against our net investments in foreign subsidiaries. For a net investment hedge, changes in the fair value of the hedging instrument designated as a net investment hedge are recorded as a component of other comprehensive income (loss) in the consolidated balance sheets. Fluctuations in the exchange rates between these foreign currencies and the U.S. Dollar will impact the amount of U.S. Dollars that we will require to settle the foreign currency debt obligations at maturity. If the U.S. Dollar would have been weaker or stronger by 10% in comparison to these foreign currencies as of December 31, 2022, we estimate our obligation to cash settle the principal of these foreign currency debt obligations in U.S. Dollars would have increased or decreased by approximately $197.9 million and $161.9 million, respectively.

We are also party to cross-currency interest rate swaps. As of December 31, 2022 and 2021, the total notional amounts of cross-currency interest rate swap contracts, which have been designated as hedges of our net investment in foreign subsidiaries, were $3.9 billion and $4.0 billion, respectively. The changes in the fair value of these swaps are recorded as a component of accumulated other comprehensive income (loss) in the consolidated balance sheets. If the U.S. Dollar weakened or strengthened by 10% in comparison to foreign currencies, we estimate our obligation to cash settle these hedges would have increased or decreased by approximately $375.6 million and $307.3 million, respectively.

The U.S. Dollar strengthened relative to certain of the currencies of the foreign countries in which we operate during the year ended December 31, 2022. This has impacted our consolidated financial position and results of operations during this period, including the amount of revenues that we reported. Continued strengthening or weakening of the U.S. Dollar will continue to impact us in future periods.

With the existing cash flow hedges in place, a hypothetical additional 10% strengthening of the U.S. Dollar during the year ended December 31, 2022 would have resulted in a reduction of our revenues and a reduction of our operating expenses including depreciation and amortization expense by approximately $222.1 million and $220.8 million, respectively.

With the existing cash flow hedges in place, a hypothetical additional 10% weakening of the U.S. Dollar during the year ended December 31, 2022 would have resulted in an increase of our revenues and an increase of our operating expenses including depreciation and amortization expenses, by approximately $284.3 million and $283.7 million, respectively.

Commodity Price Risk

Certain operating costs incurred by us are subject to price fluctuations caused by the volatility of underlying commodity prices. The commodities most likely to have an impact on our results of operations in the event of price changes are electricity, supplies and equipment used in our IBX data centers. We closely monitor the cost of electricity at all of our locations. We have entered into various power contracts to purchase power at fixed prices in certain locations in Australia, Brazil, Bulgaria, Canada, China, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, Poland, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom and the U.S.

In addition, as we are building new, or expanding existing, IBX data centers, we are subject to commodity price risk for building materials related to the construction of these IBX data centers, such as steel and copper. In addition, the lead-time to procure certain pieces of equipment, such as generators, is substantial. Any delays in procuring the necessary pieces of equipment for the construction of our IBX data centers could delay the anticipated openings of these new IBX data centers and, as a result, increase the cost of these projects.

We do not currently employ forward contracts or other financial instruments to address commodity price risk other than the power contracts discussed above.

ITEM 8. Financial Statements and Supplementary Data

The financial statements and supplementary data required by this Item 8 are listed in Item 15(a)(1) and begin at page F-1 of this Annual Report on Form 10-K.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

There is no disclosure to report pursuant to Item 9.

ITEM 9A. Controls and Procedures

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2022.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Based on our evaluation under the framework in *Internal Control – Integrated Framework* (2013), our management concluded that our internal control over financial reporting was effective as of December 31, 2022.

The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein on page F-1 of this Annual Report on Form 10-K.

Limitations on the Effectiveness of Controls

Our management, including our Chief Executive Officer and Chief Financial Officer, believes that our disclosure controls and procedures and internal control over financial reporting are designed and operated to be effective at the reasonable assurance level. However, our management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision making can be faulty, and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the controls. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a cost effective control system, misstatements due to error or fraud may occur and not be detected.

Changes in Internal Control Over Financial Reporting

In the third quarter of 2022, as part of our multi-year project to move the backbone of our finance systems to the cloud, we completed deployment of certain modules in our new cloud enterprise resource planning (“ERP”) system to support the financial close and our reporting requirements. As a result of the ERP system implementation, certain internal controls over financial reporting have been automated, modified, or implemented to address the new control environment and processes associated with the ERP system.

There have been no other changes in our internal control over financial reporting identified in connection with the evaluation required by Rules 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the twelve months ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting

ITEM 9B. Other Information

There is no disclosure to report pursuant to Item 9B.

ITEM 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

There is no disclosure to report pursuant to Item 9C.

PART III

ITEM 10. Directors, Executive Officers and Corporate Governance

The information required by this Item is incorporated by reference to the definitive Proxy Statement for our 2023 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after December 31, 2022 pursuant to Regulation 14A.

We have adopted a Code of Ethics applicable for the Chief Executive Officer and Senior Financial Officers and a Code of Business Conduct, which are both "Code(s) of Ethics for Senior Financial Officers" as defined by applicable rules of the SEC. This information is incorporated by reference to the Equinix Proxy Statement for the 2023 Annual Meeting of Stockholders and is also available on our website, www.equinix.com.

ITEM 11. Executive Compensation

The information required by this Item is incorporated by reference to the definitive Proxy Statement for our 2023 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after December 31, 2022 pursuant to Regulation 14A.

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information required by this item is incorporated by reference to the Equinix Proxy Statement for the 2023 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after December 31, 2022 pursuant to Regulation 14A.

ITEM 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is incorporated by reference to the definitive Proxy Statement for our 2023 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after December 31, 2022 pursuant to Regulation 14A.

ITEM 14. Principal Accountant Fees and Services

The information required by this Item is incorporated by reference to the definitive Proxy Statement for our 2023 Annual Meeting of Stockholders, which will be filed with the SEC no later than 120 days after December 31, 2022 pursuant to Regulation 14A.

PART IV

ITEM 15. Exhibits, Financial Statement Schedules

(a)(1) Financial Statements:

(a)(2) Financial statements and schedule:

(a)(3) Exhibits:

		Incorporated by Reference			
Exhibit Number	**Exhibit Description**	**Form**	**Filing Date/ Period End Date**	**Exhibit**	**Filed Herewith**
2.1	Rule 2.7 Announcement, dated as May 29, 2015. Recommended Cash and Share Offer for Telecity Group plc by Equinix, Inc.	8-K	5/29/2015	2.1	
2.2	Cooperation Agreement, dated as of May 29, 2015, by and between Equinix, Inc. and Telecity Group plc.	8-K	5/29/2015	2.2	
2.3	Amendment to Cooperation Agreement, dated as of November 24, 2015, by and between Equinix, Inc. and Telecity Group plc.	10-K	12/31/2015	2.3	
2.4	Transaction Agreement, dated as of December 6, 2016, by and between Verizon Communications Inc. and Equinix, Inc.	8-K	12/6/2016	2.1	
2.5	Amendment No. 1 to the Transaction Agreement, dated February 23, 2017, by and between Verizon Communications Inc. and Equinix, Inc.	10-K	12/31/2016	2.5	
2.6	Amendment No.2 to the Transaction Agreement, dated April 30, 2017, by and between Verizon Communications Inc. and Equinix, Inc.	8-K	5/1/2017	2.1	
2.7	Amendment No.3 to the Transaction Agreement, dated June 29, 2018, by and between Verizon Communications Inc. and Equinix, Inc.	10-Q	8/8/2018	2.7	
3.1	Amended and Restated Certificate of Incorporation of the Registrant, as amended to date.	10-K/A	12/31/2002	3.1	

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Filing Date/ Period End Date	Exhibit	
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Registrant.	8-K	6/14/2011	3.1	
3.3	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Registrant.	8-K	6/11/2013	3.1	
3.4	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Registrant.	10-Q	6/30/2014	3.4	
3.5	Certificate of Designation of Series A and Series A-1 Convertible Preferred Stock.	10-K/A	12/31/2002	3.3	
3.6	Amended and Restated Bylaws of the Registrant.	8-K	4/13/2022	3.1	
4.1	Reference is made to Exhibits 3.1, 3.2, 3.3, 3.4, 3.5 and 3.6.				
4.2	Indenture, dated as of December 12, 2017, between Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	12/5/2017	4.1	
4.3	Fourth Supplemental Indenture, dated as of November 18, 2019, among Equinix, Inc and U.S. Bank National Association, as Trustee.	8-K	11/18/2019	4.2	
4.4	Form of 2.625% Senior Notes due 2024 (See Exhibit 4.3).				
4.5	Fifth Supplemental Indenture, dated as of November 18, 2019, among Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	11/18/2019	4.4	
4.6	Form of 2.900% Senior Notes due 2026 (See Exhibit 4.5).				
4.7	Sixth Supplemental Indenture, dated as of November 18, 2019, among Equinix, Inc. and U.S. Bank National Association, as trustee.	8-K	11/18/2019	4.6	
4.8	Form of 3.200% Senior Notes due 2029 (See Exhibit 4.7)	8-K	6/22/2020		
4.9	Seventh Supplemental Indenture, dated as of June 22, 2020, among Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	6/22/2020	4.2	
4.10	Form of 1.250% Senior Note due 2025 (See Exhibit 4.9)				
4.11	Eighth Supplemental Indenture, dated as of June 22, 2020, among Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	6/22/2020	4.4	
4.12	Form of 1.800% Senior Note due 2027 (See Exhibit 4.11)				
4.13	Ninth Supplemental Indenture, dated as of June 22, 2020, among Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	6/22/2020	4.6	
4.14	Form of 2.150% Senior Note due 2030 (see Exhibit 4.13)				

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Filing Date/ Period End Date	Exhibit	
4.15	Tenth Supplemental Indenture, dated as of June 22, 2020, among Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	6/22/2020	4.8	
4.16	Form of 3.000% Senior Note due 2050 (See Exhibit 4.15)				
4.17	Eleventh Supplemental Indenture, dated as of October 7, 2020, among Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	10/7/2020	4.2	
4.18	Form of 1.000% Senior Note due 2025 (included in Exhibit 4.17)				
4.19	Twelfth Supplemental Indenture, dated as of October 7, 2020, among Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	10/7/2020	4.4	
4.20	Form of 1.550% Senior Note due 2028 (included in Exhibit 4.19)				
4.21	Thirteenth Supplemental Indenture, dated as of October 7, 2020, among Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	10/7/2020	4.6	
4.22	Form of 2.950% Senior Note due 2051 (included in Exhibit 4.21)				
4.23	Fourteenth Supplemental Indenture, dated as of March 10, 2021, between Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	3/11/2021	4.2	
4.24	Form of 0.250% Senior Note due 2027 (included in Exhibit 4.23)				
4.25	Fifteenth Supplemental Indenture, dated as of March 10, 2021, between Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	3/11/2021	4.4	
4.26	Form of 1.000% Senior Note due 2033 (included in Exhibit 4.25)				
4.27	Sixteenth Supplemental Indenture, dated as of May 17, 2021, between Equinix, Inc. and U.S. Bank.	8-K	5/17/2021	4.2	
4.28	Form of 1.450% Senior Note due 2026 (included in Exhibit 4.34) Form of 1.450% Senior Note due 2026 (included in Exhibit 4.27)				
4.29	Seventeenth Supplemental Indenture, dated as of May 17, 2021, between Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	5/17/2021	4.4	
4.30	Form of 2.000% Senior Note due 2028 (included in Exhibit 4.29)				
4.31	Eighteenth Supplemental Indenture, dated May 17, 2021, between Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	5/17/2021	4.6	
4.32	Form of 2.500% Senior Note due 2031 (included in Exhibit 4.31)				
4.33	Nineteenth Supplemental Indenture, dated May 17, 2021, between Equinix, Inc. and U.S. Bank National Association, as Trustee.	8-K	5/17/2021	4.8	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Filing Date/ Period End Date	Exhibit	Filed Herewith
4.34	Form of 3.400% Senior Note due 2052 (included in Exhibit 4.33)				
4.35	Twentieth Supplemental Indenture, dated as of April 5, 2022, between Equinix, Inc. and U.S. Bank Trust Company National Association, as Trustee.	8-K	4/5/2022	4.2	
4.36	Form of 3.900% Senior Notes due 2032 (included in Exhibit 4.35)				
4.37	Form of Registrant's Common Stock Certificate.	10-K	12/31/2014	4.13	
4.38	Description of Securities				X
10.1**	Form of Indemnification Agreement between the Registrant and each of its officers and directors.	S-4 (File No. 333-93749)	12/29/1999	10.5	
10.2**	2000 Equity Incentive Plan, as amended.	10-K	12/31/2021	10.2	
10.3**	2020 Equity Incentive Plan	DEF14A	4/27/2020	Appendix A	
10.4**	Equinix, Inc. 2004 Employee Stock Purchase Plan, as amended.				X
10.5**	2020 Form of Revenue/AFFO per Share Restricted Stock Unit Agreement for Executives.	10-Q	3/31/2020	10.19	
10.6**	2020 Form of TSR Restricted Stock Unit Agreement for Executives.	10-Q	3/31/2020	10.20	
10.7**	2020 Form of Time-Based Restricted Stock Agreement for Executives.	10-Q	3/31/2020	10.21	
10.8**	2021 Form of Revenue/AFFO per Share Restricted Stock Unit Agreement for Executives.	10-Q	3/31/2021	10.11	
10.9**	2021 Form of TSR Restricted Stock Unit Agreement for Executives.	10-Q	3/31/2021	10.12	
10.10**	2021 Form of Time-Based Restricted Stock Unit Agreement for Executives.	10-Q	3/31/2021	10.13	
10.11**	2022 Form of Revenue/AFFO per Share/Digital Services Performance Restricted Stock Unit Agreement for Executives.	10-Q	3/31/2022	10.11	
10.12**	2022 Form of TSR Restricted Stock Unit Agreement for Executives.	10-Q	3/31/2022	10.12	
10.13**	2022 Form of Time-Based Restricted Stock Unit Agreement for Executives.	10-Q	3/31/2022	10.13	
10.14**	2022 Equinix, Inc. Annual Incentive Plan.	10-Q	3/31/2022	10.14	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Filing Date/ Period End Date	Exhibit	Filed Herewith
10.15	Agreement for Purchase and Sale of Shares Among RW Brasil Fundo de Investimentos em Participação, Antônio Eduardo Zago De Carvalho and Sidney Victor da Costa Breyer, as Sellers, and Equinix Brasil Participaçãoes Ltda., as Purchaser, and Equinix South America Holdings LLC., as a Party for Limited Purposes and ALOG Soluções de Tecnologia em Informática S.A. as Intervening Consenting Party dated July 18, 2014.	10-Q	9/30/2014	10.67	
10.16	Credit Agreement dated January 7, 2022 by and among Equinix, as borrower, a syndicate of financial institutions, as lenders, Bank of America, N.A., as administrative agent, Citibank, N.A., JPMorgan Chase Bank, N.A., MUFG Bank, Ltd., RBC Capital Markets, Goldman Sachs Bank USA and HSBC Securities (USA) Inc., as co-syndication agents, Barclays Bank PLC, BNP Paribas, Deutsche Bank AG New York Branch, ING Bank N.V., Dublin Branch, Morgan Stanley Senior Funding, Inc., Sumitomo Mitsui Banking Corporation, The Bank of Nova Scotia and TD Securities (USA) LLC, as co-documentation agents, and BofA Securities, Inc., Citibank, N.A., JPMorgan Chase Bank, N.A., MUFG Bank, Ltd., RBC Capital Markets, Goldman Sachs Bank USA and HSBC Securities (USA) Inc., as joint lead arrangers and book runners.	10-K	12/31/2021	10.22	
10.17**	Relocation Letter Agreement by and between Equinix, Inc. and Charles Meyers dated October 12, 2018.	10-K	2/22/2019	10.37	
10.18**	Change in Control Severance Agreement between Equinix, Inc and Mike Campbell dated October 3, 2019.	10-Q	9/30/2019	10.25	
10.19**	Change in Control Severance Agreement between Equinix, Inc and Brandi Galvin Morandi dated October 3, 2019.	10-Q	9/30/2019	10.26	
10.20**	Change in Control Severance Agreement between Equinix, Inc and Karl Strohmeyer dated October 3, 2019.	10-Q	9/30/2019	10.27	
10.21**	Change in Control Severance Agreement between Equinix, Inc and Peter Van Camp dated October 3, 2019.	10-Q	9/30/2019	10.28	
10.22**	Change in Control Severance Agreement between Equinix, Inc and Charles Meyers dated October 4, 2019.	10-Q	9/30/2019	10.29	
10.23**	Change in Control Severance Agreement between Equinix, Inc and Keith Taylor dated October 3, 2019.	10-Q	9/30/2019	10.31	
10.24**	Change in Control Severance Agreement between Equinix, Inc and Jon Lin dated January 2, 2022.				X

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Filing Date/ Period End Date	Exhibit	
10.25**	Change in Control Severance Agreement between Equinix, Inc. and Scott Crenshaw dated August 1, 2022.				X
10.26**	Side Letter Agreement Regarding RSUs between Equinix, Inc. and Charles Meyers dated October 4, 2019.	10-Q	9/30/2019	10.34	
10.27**	Side Letter Agreement Regarding RSUs between Equinix, Inc. and Keith Taylor dated October 3, 2019.	10-Q	9/30/2019	10.36	
10.28**	Side Letter Agreement Regarding RSUs between Equinix, Inc. and Mike Campbell dated October 3, 2019.	10-Q	9/30/2019	10.37	
10.29**	Side Letter Agreement Regarding RSUs between Equinix, Inc. and Brandi Galvin Morandi dated October 3, 2019.	10-Q	9/30/2019	10.38	
10.30**	Side Letter Agreement Regarding RSUs between Equinix, Inc. and Karl Strohmeyer dated October 3, 2019.	10-Q	9/30/2019	10.39	
10.31**	Side Letter Agreement Regarding RSUs between Equinix, Inc. and Peter Van Camp dated October 3, 2019.	10-Q	9/30/2019	10.40	
10.32**	Amendment to Relocation Letter Agreement by and between Equinix, Inc. and Charles Meyers dated September 21, 2022.	10-Q	9/30/2022	10.39	
21.1	Subsidiaries of Equinix, Inc.				X
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.				X
31.1	Chief Executive Officer Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
31.2	Chief Financial Officer Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				X
32.1	Chief Executive Officer Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				X
32.2	Chief Financial Officer Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				X
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.				X
101.SCH	Inline XBRL Taxonomy Extension Schema Document.				X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.				X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.				X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.				X

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Filing Date/ Period End Date	Exhibit	
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.				X
104	Cover Page Interactive Data File - the cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.				X

** Management contracts or compensation plans or arrangements in which directors or executive officers are eligible to participate.

(b) Exhibits.

See (a) (3) above.

(c) Financial Statement Schedule.

See (a) (2) above.

ITEM 16. Form 10-K Summary

Not applicable.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

EQUINIX, INC.
(Registrant)

February 17, 2023	By	/s/ CHARLES MEYERS
		Charles Meyers *Chief Executive Officer and President*

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Charles Meyers or Keith D. Taylor, or either of them, each with the power of substitution, their attorney-in-fact, to sign any amendments to this Annual Report on Form 10-K (including post-effective amendments), and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or their substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ CHARLES MEYERS Charles Meyers	Chief Executive Officer and President (Principal Executive Officer)	February 17, 2023
/s/ KEITH D. TAYLOR Keith D. Taylor	Chief Financial Officer (Principal Financial Officer)	February 17, 2023
/s/ SIMON MILLER Simon Miller	Chief Accounting Officer (Principal Accounting Officer)	February 17, 2023
/s/ PETER F. VAN CAMP Peter F. Van Camp	Executive Chairman	February 17, 2023
/s/ NANCI CALDWELL Nanci Caldwell	Director	February 17, 2023
/s/ ADAIRE FOX-MARTIN Adaire Fox-Martin	Director	February 17, 2023
/s/ RON GUERRIER Ron Guerrier	Director	February 17, 2023
/s/ GARY F. HROMADKO Gary F. Hromadko	Director	February 17, 2023
/s/ IRVING F. LYONS, III Irving F. Lyons, III	Director	February 17, 2023
/s/ CHRISTOPHER B. PAISLEY Christopher B. Paisley	Director	February 17, 2023
/s/ SANDRA RIVERA Sandra Rivera	Director	February 17, 2023
/s/ THOMAS OLINGER Thomas Olinger	Director	February 17, 2023
/s/ JEETU PATEL Jeetu Patel	Director	February 17, 2023
/s/ FIDELMA RUSSO Fidelma Russo	Director	February 17, 2023

Index to Exhibits

Exhibit Number	Description of Document
4.38	Description of Securities
10.4**	Equinix, Inc. 2004 Employee Stock Purchase Plan, as amended.
10.24**	Change in Control Severance Agreement between Equinix, Inc a nd Jon Lin dated January 2, 2022.
10.25**	Change in Control Severance Agreement between Equinix, Inc. and Scott Crenshaw dated August 1, 2022.
21.1	Subsidiaries of Equinix, Inc.
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.
31.1	Chief Executive Officer Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Chief Financial Officer Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Chief Executive Officer Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Chief Financial Officer Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Document.
101.LAB	Inline XBRL Taxonomy Extension Labels Document.
101. PRE	Inline XBRL Taxonomy Extension Presentation Document.
104	Cover Page Interactive Data File - the cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.

** Management contracts or compensation plans or arrangements in which directors or executive officers are eligible to participate.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Equinix, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Equinix, Inc. and its subsidiaries (the "Company") as of December 31, 2022 and December 31, 2021, and the related consolidated statements of operations, of comprehensive income (loss), of stockholders' equity and other comprehensive income (loss) and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes and financial statement schedule listed in the index appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Income taxes - Real estate investment trust asset tests

As described in Notes 1 and 14 to the consolidated financial statements, the Company recorded income tax expense of $124.8 million for the year ended December 31, 2022. The Company has been operating as a real estate investment trust for federal income tax purposes ("REIT") effective January 1, 2015. As a result, the Company may deduct the dividends made to its stockholders from taxable income generated by the Company and its qualified REIT subsidiaries ("QRSs"). The Company’s qualification and taxation as a REIT depends on its satisfaction of certain asset, income, organizational, distribution, stockholder ownership and other requirements on a continuing basis. The Company’s ability to satisfy quarterly asset tests depends upon its analysis and the fair market values of its REIT and non-REIT assets. For purposes of the quarterly REIT asset tests, management estimates the fair market value of assets within its QRSs and taxable REIT subsidiaries (“TRSs”) using a discounted cash flow approach, by calculating the present value of forecasted future cash flows. Management applies discount rates based on industry benchmarks relative to the market and forecasting risks. Other significant assumptions used by management to estimate the fair market value of assets in QRSs and TRSs include projected revenue growth, projected operating margins, and projected capital expenditures. Management revisits significant assumptions periodically to reflect any changes due to the business or economic environment.

The principal considerations for our determination that performing procedures relating to income taxes - REIT asset tests is a critical audit matter are (i) the significant judgment by management when determining the fair market value of REIT and non-REIT assets, which in turn led to a high degree of subjectivity in performing procedures relating to the REIT asset tests, (ii) the significant audit effort and judgment in evaluating audit evidence related to the significant assumptions used in the REIT asset tests related to the discount rates, projected revenue growth, projected operating margins, and projected capital expenditures, and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the REIT asset tests, including controls over management's determination of the fair market value of REIT and non-REIT assets. These procedures also included, among others, testing management’s process for estimating the fair market value of the REIT and non-REIT assets; evaluating the appropriateness of the discounted cash flow approach; testing the completeness and accuracy of underlying data used in the approach; and evaluating the significant assumptions used by management related to the discount rates, projected revenue growth, projected operating margins, and projected capital expenditures. Evaluating management’s assumptions related to projected revenue growth, projected operating margins, and projected capital expenditures involved considering the current and past performance of the Company, economic and industry trends, as well as whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company’s discounted cash flow approach and the discount rate assumptions.

/s/ PricewaterhouseCoopers LLP

San Jose, California

February 17, 2023

We have served as the Company's auditor since 2000.

EQUINIX, INC.
Consolidated Balance Sheets
(in thousands, except share and per share data)

	December 31, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 1,906,421	$ 1,536,358
Accounts receivable, net of allowance of $ 12,225 and $11,635	855,380	681,809
Other current assets	459,138	462,739
Assets held for sale	84,316	276,195
Total current assets	3,305,255	2,957,101
Property, plant and equipment, net	16,649,534	15,445,775
Operating lease right-of-use assets	1,427,950	1,282,418
Goodwill	5,654,217	5,372,071
Intangible assets, net	1,897,649	1,935,267
Other assets	1,376,137	926,066
Total assets	$ 30,310,742	$ 27,918,698
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 1,004,800	$ 879,144
Accrued property, plant and equipment	281,347	187,334
Current portion of operating lease liabilities	139,538	144,029
Current portion of finance lease liabilities	151,420	147,841
Current portion of mortgage and loans payable	9,847	33,087
Other current liabilities	251,346	214,519
Total current liabilities	1,838,298	1,605,954
Operating lease liabilities, less current portion	1,272,812	1,107,180
Finance lease liabilities, less current portion	2,143,690	1,989,668
Mortgage and loans payable, less current portion	642,708	586,577
Senior notes, less current portion	12,109,539	10,984,144
Other liabilities	797,863	763,411
Total liabilities	18,804,910	17,036,934
Commitments and contingencies (Note 15)		
Equinix stockholders' equity:		
Preferred stock, $0.001 par value per share: 100,000,000 shares authorized in 2022 and 2021; zero shares issued and outstanding	—	—
Common stock, $0.001 par value per share: 300,000,000 shares authorized in 2022 and 2021; 92,813,976 issued and 92,620,703 outstanding in 2022 and 90,872,826 issued and 90,571,406 outstanding in 2021	93	91
Additional paid-in capital	17,320,017	15,984,597
Treasury stock, at cost; 193,273 shares in 2022 and 301,420 shares in 2021	(71,966)	(112,208)
Accumulated dividends	(7,317,570)	(6,165,140)
Accumulated other comprehensive loss	(1,389,446)	(1,085,751)
Retained earnings	2,964,838	2,260,493
Total Equinix stockholders' equity	11,505,966	10,882,082
Non-controlling interests	(134)	(318)
Total stockholders' equity	11,505,832	10,881,764
Total liabilities and stockholders' equity	$ 30,310,742	$ 27,918,698

See accompanying notes to consolidated financial statements.

EQUINIX, INC.
Consolidated Statements of Operations
(in thousands, except per share data)

	Years Ended December 31,		
	2022	2021	2020
Revenues	$ 7,263,105	$ 6,635,537	$ 5,998,545
Costs and operating expenses:			
Cost of revenues	3,751,501	3,472,422	3,074,340
Sales and marketing	786,560	741,232	718,356
General and administrative	1,498,701	1,301,797	1,090,981
Transaction costs	21,839	22,769	55,935
Impairment charges	—	—	7,306
(Gain) loss on asset sales	3,976	(10,845)	(1,301)
Total costs and operating expenses	6,062,577	5,527,375	4,945,617
Income from operations	1,200,528	1,108,162	1,052,928
Interest income	36,268	2,644	8,654
Interest expense	(356,337)	(336,082)	(406,466)
Other income (expense)	(51,417)	(50,647)	6,913
Gain (loss) on debt extinguishment	327	(115,125)	(145,804)
Income before income taxes	829,369	608,952	516,225
Income tax expense	(124,792)	(109,224)	(146,151)
Net income	704,577	499,728	370,074
Net (income) loss attributable to non-controlling interests	(232)	463	(297)
Net income attributable to Equinix	$ 704,345	$ 500,191	$ 369,777
Earnings per share ("EPS") attributable to Equinix:			
Basic EPS	$ 7.69	$ 5.57	$ 4.22
Weighted-average shares for basic EPS	91,569	89,772	87,700
Diluted EPS	$ 7.67	$ 5.53	$ 4.18
Weighted-average shares for diluted EPS	91,828	90,409	88,410

See accompanying notes to consolidated financial statements.

EQUINIX, INC.
Consolidated Statements of Comprehensive Income (Loss)
(in thousands)

	Years Ended December 31,		
	2022	2021	2020
Net income	$ 704,577	$ 499,728	$ 370,074
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustment ("CTA") gain (loss), net of tax effects of $ 0, $0 and $0	(769,886)	(559,969)	548,560
Net investment hedge CTA gain (loss), net of tax effects of $ 0, $0 and $0	425,701	326,982	(444,553)
Unrealized gain (loss) on cash flow hedges, net of tax effects of $ 2,248, $(16,980) and $14,521	40,543	60,562	(82,790)
Net actuarial gain (loss) on defined benefit plans, net of tax effects of $ 25, $(14) and $(23)	(101)	57	85
Total other comprehensive income (loss), net of tax	(303,743)	(172,368)	21,302
Comprehensive income, net of tax	400,834	327,360	391,376
Net (income) loss attributable to non-controlling interests	(232)	463	(297)
Other comprehensive (income) loss attributable to non-controlling interests	48	(15)	(57)
Comprehensive income attributable to Equinix	$ 400,650	$ 327,808	$ 391,022

See accompanying notes to consolidated financial statements.

EQUINIX, INC.

Consolidated Statements of Stockholders' Equity and Other Comprehensive Income (Loss)
For the Three Years Ended December 31, 2022
(in thousands, except share data)

	Common stock		Treasury stock		Additional Paid-in Capital	Accumulated Dividends	AOCI (Loss)	Retained Earnings	Equinix Stockholders' Equity	Non-controlling Interests	Total Stockholders' Equity
	Shares	Amount	Shares	Amount							
Balance as of December 31, 2019	85,700,953	$ 86	(392,567)	$ (144,256)	$ 12,696,433	$ (4,168,469)	$ (934,613)	$ 1,391,425	$ 8,840,606	$ (224)	$ 8,840,382
Adjustment from adoption of new accounting standard	—	—	—	—	—	—	—	(900)	(900)	—	(900)
Net income	—	—	—	—	—	—	—	369,777	369,777	297	370,074
Other comprehensive income	—	—	—	—	—	—	21,245	—	21,245	57	21,302
Issuance of common stock and release of treasury stock for employee equity awards	758,339	—	64,515	22,138	39,979	—	—	—	62,117	—	62,117
Issuance of common stock for equity offering	2,587,500	3	—	—	1,683,103	—	—	—	1,683,106	—	1,683,106
Issuance of common stock under ATM Program	415,512	—	—	—	298,269	—	—	—	298,269	—	298,269
Dividend distribution on common stock, $10.64 per share	—	—	—	—	—	(936,269)	—	—	(936,269)	—	(936,269)
Settlement of accrued dividends on vested equity awards	—	—	—	—	189	(770)	—	—	(581)	—	(581)
Accrued dividends on unvested equity awards	—	—	—	—	—	(13,766)	—	—	(13,766)	—	(13,766)
Stock-based compensation, net of estimated forfeitures	—	—	—	—	310,384	—	—	—	310,384	—	310,384
Balance as of December 31, 2020	89,462,304	89	(328,052)	(122,118)	15,028,357	(5,119,274)	(913,368)	1,760,302	10,633,988	130	10,634,118
Net income (loss)	—	—	—	—	—	—	—	500,191	500,191	(463)	499,728
Other comprehensive income (loss)	—	—	—	—	—	—	(172,383)	—	(172,383)	15	(172,368)
Issuance of common stock and release of treasury stock for employee equity awards	772,905	1	26,632	9,910	67,718	—	—	—	77,629	—	77,629
Issuance of common stock under ATM Program	637,617	1	—	—	497,869	—	—	—	497,870	—	497,870
Dividend distribution on common stock, $11.48 per share	—	—	—	—	—	(1,030,005)	—	—	(1,030,005)	—	(1,030,005)
Settlement of accrued dividends on vested equity awards	—	—	—	—	—	(839)	—	—	(839)	—	(839)
Accrued dividends on unvested equity awards	—	—	—	—	—	(15,022)	—	—	(15,022)	—	(15,022)
Stock-based compensation, net of estimated forfeitures	—	—	—	—	390,653	—	—	—	390,653	—	390,653

EQUINIX INC.

Consolidated Statements of Stockholders' Equity and Other Comprehensive Income (Loss) - Continued
For the Three Years Ended December 31, 2022
(in thousands, except share data)

	Common stock		Treasury stock		Additional Paid-in Capital	Accumulated Dividends	AOCI (Loss)	Retained Earnings	Equinix Stockholders' Equity	Non-controlling Interests	Total Stockholders' Equity
	Shares	Amount	Shares	Amount							
Balance as of December 31, 2021	90,872,826	91	(301,420)	(112,208)	15,984,597	(6,165,140)	(1,085,751)	2,260,493	10,882,082	(318)	10,881,764
Net income	—	—	—	—	—	—	—	704,345	704,345	232	704,577
Other comprehensive loss	—	—	—	—	—	—	(303,695)	—	(303,695)	(48)	(303,743)
Issuance of common stock and release of treasury stock	780,444	1	108,147	40,242	90,314	—	—	—	130,557	—	130,557
Issuance of common stock under ATM Program	1,160,706	1	—	—	796,017	—	—	—	796,018	—	796,018
Dividend distribution on common stock, $12.40 per share	—	—	—	—	—	(1,137,203)	—	—	(1,137,203)	—	(1,137,203)
Settlement of accrued dividends on vested equity awards	—	—	—	—	—	(927)	—	—	(927)	—	(927)
Accrued dividends on unvested equity awards	—	—	—	—	—	(14,300)	—	—	(14,300)	—	(14,300)
Stock-based compensation, net of estimated forfeitures	—	—	—	—	449,089	—	—	—	449,089	—	449,089
Balance as of December 31, 2022	92,813,976	$ 93	(193,273)	$ (71,966)	$ 17,320,017	$ (7,317,570)	$ (1,389,446)	$ 2,964,838	$ 11,505,966	$ (134)	$ 11,505,832

See accompanying notes to consolidated financial statements.

EQUINIX, INC.
Consolidated Statements of Cash Flows
(in thousands)

	Years Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net income	$ 704,577	$ 499,728	$ 370,074
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation	1,531,453	1,450,806	1,224,322
Stock-based compensation	403,983	363,774	294,952
Amortization of intangible assets	204,755	205,484	199,047
Amortization of debt issuance costs and debt discounts and premiums	17,826	17,135	15,739
Provision for credit loss allowance	7,426	10,016	5,069
Impairment charges	—	—	7,306
(Gain) loss on asset sales	3,976	(10,845)	(1,301)
(Gain) loss on debt extinguishment	(327)	115,125	145,804
Other items	63,038	28,717	16,643
Changes in operating assets and liabilities:			
Accounts receivable	(153,415)	(1,873)	25,412
Income taxes, net	(7,827)	(16,602)	(22,641)
Other assets	(52,276)	(114,268)	(129,817)
Operating lease right-of-use assets	149,094	140,590	153,650
Operating lease liabilities	(132,831)	(177,533)	(142,863)
Accounts payable and accrued expenses	114,600	64,596	25,801
Other liabilities	109,130	(27,644)	122,629
Net cash provided by operating activities	2,963,182	2,547,206	2,309,826
Cash flows from investing activities:			
Purchases of investments	(144,642)	(107,533)	(127,763)
Sales of investments	22,073	4,057	29,352
Business acquisitions, net of cash and restricted cash acquired	(964,010)	(158,498)	(1,180,272)
Real estate acquisitions	(248,276)	(201,837)	(200,182)
Purchases of other property, plant and equipment	(2,278,004)	(2,751,512)	(2,282,504)
Proceeds from sale of assets, net of cash transferred	249,906	208,585	334,397
Net cash used in investing activities	(3,362,953)	(3,006,738)	(3,426,972)
Cash flows from financing activities:			
Proceeds from employee equity awards	81,543	77,628	62,118
Payment of dividends	(1,151,459)	(1,042,909)	(947,933)
Proceeds from public offering of common stock, net of issuance costs	796,018	497,870	1,981,375
Proceeds from senior notes, net of debt discounts	1,193,688	3,878,662	4,431,627
Proceeds from mortgage and loans payable	676,850	—	750,790
Repayment of senior notes	—	(1,990,650)	(4,363,761)
Repayments of finance lease liabilities	(134,202)	(165,539)	(115,288)
Repayments of mortgage and loans payable	(587,941)	(717,010)	(829,466)
Debt extinguishment costs	—	(99,185)	(111,700)
Debt issuance costs	(17,731)	(25,102)	(42,236)
Net cash provided by financing activities	856,766	413,765	815,526
Effect of foreign currency exchange rates on cash, cash equivalents and restricted cash	(98,201)	(30,474)	40,702
Net increase (decrease) in cash, cash equivalents and restricted cash	358,794	(76,241)	(260,918)
Cash, cash equivalents and restricted cash at beginning of period	1,549,454	1,625,695	1,886,613
Cash, cash equivalents and restricted cash at end of period	$ 1,908,248	$ 1,549,454	$ 1,625,695
Supplemental cash flow information			
Cash paid for taxes	$ 140,312	$ 134,411	$ 143,934
Cash paid for interest	$ 430,217	$ 426,439	$ 498,408
Cash and cash equivalents	$ 1,906,421	$ 1,536,358	$ 1,604,869
Current portion of restricted cash included in other current assets	1,734	12,188	11,135
Non-current portion of restricted cash included in other assets	93	908	9,691
Total cash, cash equivalents, and restricted cash shown in the consolidated statement of cash flows	$ 1,908,248	$ 1,549,454	$ 1,625,695

See accompanying notes to consolidated financial statements.

EQUINIX, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of Business and Summary of Significant Accounting Policies

Nature of Business

Equinix, Inc. ("Equinix," the "Company," "we," "our," or "us") was incorporated in Delaware on June 22, 1998. Equinix provides colocation space and related offerings. Global enterprises, content providers, financial companies and network service providers rely upon Equinix's insight and expertise to safehouse and connect their most valued information assets. We operate International Business Exchange™ ("IBX®") data centers, or IBX data centers, across the Americas; Europe, Middle East and Africa ("EMEA") and Asia-Pacific geographic regions where customers directly interconnect with a network ecosystem of partners and customers. More than 2,000 network service providers offer access to the world's internet routes inside our IBX data centers. This access to internet routes provides Equinix customers improved reliability and streamlined connectivity while significantly reducing costs by reaching a critical mass of networks within a centralized physical location. As of December 31, 2022, we operated 236 IBX data centers in 71 markets around the world.

We have been operating as a real estate investment trust for federal income tax purposes ("REIT") effective January 1, 2015. See "Income Taxes" in Note 14 below for additional information.

Basis of Presentation, Consolidation and Foreign Currency

The accompanying consolidated financial statements include the accounts of Equinix and its subsidiaries, including the acquisitions of:

- Three data centers in Mexico acquired from Axtel S.A.B. de C.V ("Axtel") from January 8, 2020;
- Packet Host, Inc. (“Packet”), including its operations and technology, from March 2, 2020;
- 12 data center sites across Canada from BCE Inc. ("Bell") from October 1, 2020 and one additional data center site from November 2, 2020;
- Two data center sites in Mumbai, India from GPX India ("GPX India Acquisition") from September 1, 2021;
- Four data centers as well as a subsea cable and terrestrial fiber network in West Africa acquired from MainOne Cable Company ("MainOne") from April 1, 2022; and
- Four data centers in Chile and a data center in Peru acquired from Empresa Nacional De Telecomunicaciones S.A. ("Entel") from May 2, 2022 and August 1, 2022, respectively.

We consolidate all entities that are wholly owned and those entities in which we own less than 100% of the equity but control, including Variable Interest Entities ("VIEs") for which we are the primary beneficiary. Our investment in consolidated VIEs have not been material to our consolidated financial statements as of and for the periods presented. All intercompany accounts and transactions have been eliminated in consolidation. Foreign exchange gains or losses resulting from foreign currency transactions, including intercompany foreign currency transactions, that are anticipated to be repaid within the foreseeable future, are reported within other income (expense) on our accompanying consolidated statements of operations. For additional information on the impact of foreign currencies to our consolidated financial statements, see "Accumulated Other Comprehensive Loss" in Note 12.

Use of Estimates

The preparation of consolidated financial statements in conformity with the accounting principles generally accepted in the United States of America ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates. On an ongoing basis, we evaluate our estimates, including, but not limited to, those related to the allowance for credit losses, fair values of financial and derivative instruments, intangible assets and goodwill, assets acquired and liabilities assumed from acquisitions, useful lives of intangible assets and property, plant and equipment, leases, asset retirement obligations, other accruals, and income taxes.

We base our estimates on historical experience and on various other assumptions that are believed to be reasonable.

Cash, Cash Equivalents and Short-Term Investments

We consider all highly liquid instruments with an original maturity from the date of purchase of 90 days or less to be cash equivalents. Cash equivalents consist of money market mutual funds and certificates of deposit with original maturities up to 90 days. Short-term investments generally consist of certificates of deposit with original maturities of between 90 days and 1 year. Publicly traded equity securities are measured at fair value with changes in the fair values recognized within other income (expense) in our consolidated statements of operations. We review our investment portfolio quarterly to determine if any securities may be other-than-temporarily impaired due to increased credit risk, changes in industry or sector of a certain instrument or ratings downgrades.

Equity Method Investments

We enter into joint venture or partnership arrangements to invest in certain entities for business development objectives. At the inception of these arrangements and if a reconsideration event has occurred, we assess our interests with such entities to determine whether any of the entities meet the definition of a variable interest entity ("VIE"). A VIE is an entity that either (i) has insufficient equity to permit the entity to finance its activities without additional subordinated financial support, or (ii) has equity investors who lack the characteristics of a controlling financial interest. We are required to consolidate the assets and liabilities of VIEs when we are deemed to be the primary beneficiary. The primary beneficiary of a VIE is the entity that meets both of the following criteria: (i) has the power to make decisions that most significantly affect the economic performance of the VIE; and (ii) has the obligation to absorb losses or the right to receive benefits that in either case could potentially be significant to the VIE. For VIEs where we are not the primary beneficiary, and other joint ventures or partnerships that are not VIEs, where we have the ability to exercise significant influence over the entity, we account for those investments under the equity method of accounting.

Equity method investments are initially measured at cost, or at fair value when the investment represents a retained equity interest in a deconsolidated business or derecognized distinct non-financial assets. Equity investments are subsequently adjusted for cash contributions, distributions and our share of the income and losses of the investees. We record our equity method investments in other assets in the consolidated balance sheet. Our proportionate shares of the income or loss from our equity method investments are recorded in other income in the consolidated statement of operations.

We review our investments quarterly to determine if any investments may be impaired considering both qualitative and quantitative factors that may have a significant impact on the investees' fair value. We did not record any impairment charges related to our equity method investments for the years ended December 31, 2022, 2021 and 2020. For further information on our Equity Method Investments, see Note 6.

Non-marketable Equity Investments

We also have investments in non-marketable equity securities, where we do not have the ability to exercise significant influence over the investees. We elected the measurement alternative under which the securities are measured at cost minus impairment, if any, and adjusted for changes resulting from qualifying observable price changes. We record non-marketable equity investment in other assets in the consolidated balance sheet. We review our non-marketable equity investments quarterly to determine if any investments may be impaired considering both qualitative and quantitative factors that may have a significant impact on the investees' fair value. We did not record any impairment charges related to our non-marketable equity investments for the years ended December 31, 2022, 2021 and 2020.

Financial Instruments and Concentration of Credit Risk

Financial instruments which potentially subject us to concentrations of credit risk consist of cash and cash equivalents, short-term investments and accounts receivable. Risks associated with cash and cash equivalents and short-term investments are mitigated by our investment policy, which limits our investing to only those marketable securities rated at least A-1/P-1 Short Term Rating or A-/A3 Long Term Rating, as determined by independent credit rating agencies.

A significant portion of our customer base is comprised of businesses throughout the Americas. However, a portion of our revenues are derived from our EMEA and Asia-Pacific operations. The following table sets forth percentages of our revenues by geographic region for the years ended December 31:

	2022	2021	2020
Americas	46 %	46 %	45 %
EMEA	32 %	32 %	33 %
Asia-Pacific	22 %	22 %	22 %

For further information on segment information, see Note 17.

Property, Plant and Equipment

Property, plant and equipment are stated at our original cost or initial fair value for property, plant and equipment acquired through acquisitions, net of depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the respective assets. Buildings under finance leases, Leasehold improvements and integral equipment at leased locations are amortized over the shorter of the lease term or the estimated useful life of the asset or improvement.

We capitalize certain internal and external costs associated with the development and purchase of internal-use software in property, plant and equipment, net on the consolidated balance sheets. This includes costs incurred in cloud computing arrangements ("CCA"), where it is both feasible and contractually permissible without significant penalty for us to take possession of the software. All other CCAs are considered service contracts, and the licensing and implementation costs incurred associated with such contracts are capitalized in other assets on the consolidated balance sheets. Capitalized internal-use software costs and capitalized implementation costs are amortized on a straight-line basis over the estimated useful lives of the software or arrangements.

Our estimated useful lives of property, plant and equipment are generally as follows:

Core systems	3 - 40 years
Buildings	12 - 60 years
Leasehold improvements	12 - 40 years
Personal Property, including capitalized internal-use software	3 - 10 years

Our construction in progress includes direct and indirect expenditures for the construction and expansion of IBX data centers and is stated at original cost. We contracted out substantially all of the construction and expansion efforts of our IBX data centers to independent contractors under construction contracts. Construction in progress includes costs incurred under construction contracts including project management services, engineering and schematic design services, design development, construction services and other construction-related fees and services. In addition, we capitalized interest costs during the construction phase. Once an IBX data center or expansion project becomes operational, these capitalized costs are allocated to certain property, plant and equipment categories and are depreciated over the estimated useful lives of the underlying assets.

We review our property, plant and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or an asset group may not be recoverable, such as a significant decrease in market price of an asset, a significant adverse change in the extent or manner in which an asset or an asset group is being used or its physical condition, a significant adverse change in legal factors or business climate that could affect the value of an asset or an asset group or a continuous deterioration of our financial condition. Recoverability of assets or asset groups to be held and used is assessed by comparing the carrying amount of an asset or an asset group to estimated undiscounted future net cash flows expected to be generated by the asset or the asset group. If the carrying amount of the asset or the asset group exceeds its estimated undiscounted future cash flows, an impairment charge is recognized in the amount by which the carrying amount of the asset or the asset group exceeds the fair value of the asset. We did not record any impairment charges related to our property, plant and equipment during the years ended December 31, 2022, 2021 and 2020.

We enter into non-cancellable lease arrangements as the lessee primarily for our data center spaces, office spaces and equipment. Assets acquired through finance leases are included in property, plant and equipment, net on the consolidated balance sheets. In addition, a portion of our property, plant and equipment are used for revenue arrangements which are accounted for as operating leases where we are the lessor.

Assets Held for Sale

Assets and liabilities to be disposed of that meet all of the criteria to be classified as held for sale are reported at the lower of their carrying amounts or fair values less costs to sell. We recorded an impairment charge of $7.3 million relating to assets held for sale for the year ended December 31, 2020. Assets are not depreciated or amortized while they are classified as held for sale. For further information on our assets held for sale, see Note 5.

Asset Retirement Costs and Asset Retirement Obligations

Our asset retirement obligations are primarily related to our IBX data centers, of which the majority are leased under long-term arrangements and are required to be returned to the landlords in their original condition. The majority of our IBX data center leases have been subject to significant development by us in order to convert them from, in most cases, vacant buildings or warehouses into IBX data centers. The fair value of a liability for an asset retirement obligation is recognized in the period in which it is incurred. The associated retirement costs are capitalized and included as part of the carrying value of the long-lived asset and amortized over the useful life of the asset. Subsequent to the initial measurement, we accrete the liability in relation to the asset retirement obligations over time and the accretion expense is recorded as a cost of revenue. For further information on our asset retirement obligations, see Note 7.

Goodwill and Other Intangible Assets

We have three reportable segments comprised of the 1) Americas, 2) EMEA and 3) Asia-Pacific geographic regions, which we also determined are our reporting units. Goodwill is not amortized and is tested for impairment at least annually or more often if and when circumstances indicate that goodwill is not recoverable.

We assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. Qualitative factors considered in the assessment include industry and market conditions, overall financial performance, and other relevant events and factors affecting the reporting unit. If, after assessing the qualitative factors, we determine that it is not more likely than not that the fair value of a reporting unit is less than its carrying value, then performing a quantitative impairment test is unnecessary. However, if we conclude otherwise, then we are required to perform a quantitative goodwill impairment test. The quantitative impairment test, which is used to identify both the existence of impairment and the amount of impairment loss, compares the fair value of a reporting unit with its carrying amount, including goodwill. If the fair value of a reporting unit exceeds its carrying amount, goodwill of the reporting unit is not considered impaired. If the carrying value of the reporting unit exceeds its fair value, any excess of the reporting unit goodwill carrying value over the respective implied fair value is recognized as an impairment loss.

As of December 31, 2022, 2021 and 2020, we concluded that it was more likely than not that goodwill attributed to our Americas, EMEA and Asia-Pacific reporting units was not impaired as the fair value of each reporting unit exceeded the carrying value of its respective reporting unit, including goodwill.

Substantially all of our intangible assets are subject to amortization and are amortized using the straight-line method over their estimated period of benefit. We perform a review of intangible assets for impairment by assessing events or changes in circumstances that indicate the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is assessed by comparing the carrying amount of an asset to estimated undiscounted future net cash flows expected to be generated by the asset. If the carrying amount of the asset exceeds its estimated undiscounted future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. We did not record any impairment charges related to our other intangible assets during the years ended December 31, 2022, 2021 and 2020. For further information on goodwill and other intangible assets, see Note 3 and Note 7 below.

Debt Issuance Costs

Costs and fees incurred upon debt issuances are capitalized and are amortized over the life of the related debt based on the effective interest method. Such amortization is included as a component of interest expense. Debt issuance costs related to outstanding debt are presented as a reduction of the carrying amount of the debt obligation and debt issuance costs related to the revolving credit facility are presented as other assets. For further information on debt facilities, see Note 11 below.

Derivatives and Hedging Activities

We utilize foreign currency and interest rate derivative instruments as part of our risk management strategy. Foreign currency derivatives help to mitigate the effects of foreign exchange rate fluctuations on (i) our expected revenues and expenses in the EMEA region, (ii) investments in our foreign operations and (iii) certain monetary assets and liabilities denominated in foreign currencies. Interest rate derivatives, on the other hand, are used to manage the interest rate risk associated with anticipated fixed-rate debt issuances.

These measures allow us to effectively control our financial exposure and are not used for speculative purposes. We recognize all derivatives on our consolidated balance sheets at fair value. The accounting for changes in the value of a derivative depends on whether the contract qualifies and has been designated for hedge accounting. In order to qualify for hedge accounting, a derivative must be considered highly effective at reducing the risk associated with the exposure being hedged and there must be documentation of the risk management objective and strategy, including identification of the hedging instrument, the hedged item and the risk exposure, and the effectiveness assessment methodology. Hedge designations are reviewed on a quarterly basis to assess whether circumstances have changed that would disrupt the hedge instrument's relationship to the forecasted transactions or net investment.

Cash Flow Hedges

The instruments we designate as cash flow hedges include foreign currency forwards and options, cross-currency swaps as well as interest rate locks. For cash flow hedges, we use a regression analysis at the time they are designated to assess their effectiveness.

We use foreign currency forwards and options to hedge our foreign currency transaction exposure for forecasted revenues and expenses in our EMEA region between the U.S. Dollar and the British Pound, Euro, Swedish Krona, and Swiss Franc. We use the forward method to assess effectiveness of qualifying foreign currency forwards that are designated as cash flow hedges, whereby, the change in the fair value of the derivative is recorded in other comprehensive income (loss) and reclassified to the same line item in the consolidated statement of operations that is used to present the earnings effect of the hedged item when the hedged item affects earnings. We use the spot method to assess effectiveness of qualifying foreign currency exchange options that are designated as cash flow hedges, whereby, the change in fair value due to foreign currency exchange spot rates is recorded in other comprehensive income (loss) and reclassified to the same line item in the consolidated statement of operations that is used to present the earnings effect of the hedged item when the hedged item affects earnings, and the change in fair value of the excluded component is recorded in other comprehensive income (loss) and amortized on a straight-line basis to the same line item in the consolidated statement of operations that is used to present the earnings effect of the hedged item. When two or more derivative instruments in combination are jointly designated as a cash flow hedging instrument, as with foreign currency exchange option collars, they are treated as a single instrument. If the hedge relationship is terminated for any derivatives designated as cash flow hedges, then the change in fair value of the derivative recorded in other comprehensive income (loss) is recognized in earnings when the previously hedged item affects earnings, consistent with the original hedge strategy.

We also utilize cross-currency interest rate swaps, which we designate as cash flow hedges, to manage the foreign currency exposure associated with a portion of our foreign currency-denominated debt. We assess the effectiveness of cross-currency interest rate swaps that are designated as cash flow hedges using the spot method. The fair value changes are recorded in other comprehensive income (loss), and when the hedged item impacts earnings, the change in fair value due to foreign currency exchange spot rates is reclassified to the corresponding line item in the consolidated statement of operations.

We use interest rate derivative instruments such as treasury locks and swap locks, collectively referred to as "interest rate locks", to manage interest rate exposure created by anticipated fixed rate debt issuances. An interest rate lock is a synthetic forward sale of a benchmark interest rate, which is settled in cash based upon the difference between an agreed upon rate at inception and the prevailing benchmark rate at settlement. It effectively fixes the benchmark rate component of an upcoming debt issuance. The interest rate lock transactions are designated as cash flow hedges, with all changes in value reported in other comprehensive income (loss). Subsequent to settlement, amounts in other comprehensive income are amortized to interest expense over the term of the interest rate locks.

For hedge relationships that are discontinued because the forecasted transaction is not expected to occur according to the original strategy, any related derivative amounts recorded in other comprehensive income (loss) are immediately recognized in earnings.

Net Investment Hedges

We employ cross-currency swaps, which we designate as net investment hedges, to hedge the currency exposure associated with our net investment in our foreign subsidiaries. We use the spot method to assess effectiveness of cross-currency interest rate swaps that are designated as net investment hedges, whereby, the change in fair value due to foreign currency exchange spot rates is recorded in other comprehensive income (loss) and the change in fair value of the excluded component is recorded in other comprehensive income (loss) and amortized to interest expense on a straight-line basis.

Occasionally, we also use foreign exchange forward contracts, which we designate as net investment hedges, to hedge against the effect of foreign exchange rate fluctuations on a portion of our net investment in the foreign subsidiaries. We use the spot method to assess effectiveness of qualifying foreign currency forwards that are designated as net investment hedges, whereby, the change in fair value due to foreign currency exchange spot rates is recorded in other comprehensive income (loss) and the change in fair value of the excluded component is recorded in other comprehensive income (loss) and amortized to interest expense on a straight-line basis.

Non-designated Hedges

Foreign currency gains or losses associated with derivatives that are not designated as hedging instruments for accounting purposes are recorded within other income (expense) in our consolidated statements of operations, with the exception of (i) foreign currency embedded derivatives contained in certain of our customer contracts and (ii) foreign exchange forward contracts that are entered into to hedge the accounting impact of the foreign currency embedded derivatives, which are recorded within revenues in our consolidated statements of operations. For further information on derivatives and hedging activities, see Note 8 below.

Fair Value of Financial Instruments

The carrying value of our cash and cash equivalents, short-term investments and derivative instruments represent their fair value, while our accounts receivable, accounts payable and accrued expenses and accrued property, plant and equipment approximate their fair value due primarily to the short-term maturity of the related instruments. The fair value of our debt, which is traded in the public debt market, is based on quoted market prices. The fair value of our debt, which is not publicly traded, is estimated by considering our credit rating, current rates available to us for debt of the same remaining maturities and terms of the debt.

Fair Value Measurements

We measure and report certain financial assets and liabilities at fair value on a recurring basis, including our investments in money market funds, certificates of deposit, publicly traded equity securities and derivatives.

We also follow the accounting standard for the measurement of fair value for non-financial assets and liabilities on a nonrecurring basis. These include:

- Non-financial assets and non-financial liabilities initially measured at fair value in a business combination or other new basis event, but not measured at fair value in subsequent reporting periods;
- Reporting units and non-financial assets and non-financial liabilities measured at fair value for goodwill impairment tests;
- Indefinite-lived intangible assets measured at fair value for impairment assessments;

- Non-financial long-lived assets or asset groups measured at fair value for impairment assessments or disposal;
- Asset retirement obligations initially measured at fair value but not subsequently measured at fair value; and
- Assets and liabilities classified as held for sale are measured at fair value less costs to sell and reported at the lower of the carrying amounts or the fair values less costs to sell.

For further information on fair value measurements, see Note 5 and Note 9 below.

Leases

We enter into lease arrangements primarily for land, data center spaces, office spaces and equipment. At its inception, we determine whether an arrangement is or contains a lease. We recognize a right-of-use ("ROU") asset and lease liability on the consolidated balance sheet for all leases with a term longer than 12 months, including renewals options that we are reasonably certain to exercise.

ROU assets represent our right to use an underlying asset for the lease term. Lease liabilities represent our obligation to make lease payments arising from the lease. ROU assets and liabilities are classified and recognized at the commencement date. When there is a lease modification, including a change in lease term, we reassess its classification and remeasure the ROU asset and lease liability.

ROU lease liabilities are measured based on the present value of fixed lease payments over the lease term. ROU assets consist of (i) initial measurement of the lease liability; (ii) lease payments made to the lessor at or before the commencement date less any lease incentives received; and (iii) initial direct costs incurred by us. Lease payments may vary because of changes in facts or circumstances occurring after the commencement, including changes in inflation indices. Variable lease payments that depend on an index or a rate (such as the Consumer Price Index or a market interest rate) are included in the measurement of ROU assets and lease liabilities using the index or rate at the commencement date. Subsequent changes to lease payments based on changes to the index and rate are accounted for as variable lease payments and recognized in the period they are incurred. Variable lease payments that do not depend on an index or a rate are excluded from the measurement of ROU assets and lease liabilities and are recognized in the period in which the obligation for those payments is incurred. Since most of our leases do not provide an implicit rate, we use our own incremental borrowing rate ("IBR") on a collateralized basis in determining the present value of lease payments. We utilize a market-based approach to estimate the IBR. The approach requires significant judgment. Therefore, we utilize different data sets to estimate IBRs via an analysis of (i) sovereign rates; (ii) yields on our outstanding public debt; and (iii) indicative pricing on both secured and unsecured debt received from banking partners. We also apply adjustments to account for considerations related to (i) tenor; and (ii) country credit rating that may not be fully incorporated by the aforementioned data sets.

The majority of our lease arrangements include options to extend the lease. If we are reasonably certain to exercise such options, the periods covered by the options are included in the lease term. The depreciable lives of certain fixed assets and leasehold improvements are limited by the expected lease term. We have certain leases with a term of 12 months or less. For such leases, we elected not to recognize any ROU asset or lease liability on the consolidated balance sheet. We have lease agreements with lease and non-lease components. We elected to account for the lease and non-lease components as a single lease component for all classes of underlying assets for which we have identified as lease arrangements. For further information on leases, see Note 10 below.

Revenue

Revenue Recognition

Equinix derives more than 90% of its revenues from recurring revenue streams, consisting primarily of (1) colocation, which includes the licensing of cabinet space and power; (2) interconnection offerings; (3) managed infrastructure solutions and (4) other revenues consisting of rental income from tenants or subtenants. The remainder of our revenues are from non-recurring revenue streams, such as installation revenues, professional services, contract settlements and equipment sales. Revenues by service lines and geographic areas are included in segment information. For further information on segment information, see Note 17 below.

Revenues are recognized when control of these products and services is transferred to its customers, in an amount that reflects the consideration it expects to be entitled to in exchange for the products and services. Revenues from recurring revenue streams are generally billed monthly and recognized ratably over the term of the contract, generally 1 to 3 years for IBX data center colocation customers. Non-recurring installation fees, although generally paid upfront upon installation, are deferred and recognized ratably over the contract term. Professional service fees and equipment sales are recognized in the period when the services were provided. For the contracts with customers that contain multiple performance obligations, we account for individual performance obligations separately if they are distinct or as a series of distinct obligations if the individual performance obligations meet the series criteria. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. The transaction price is allocated to the separate performance obligation on a relative standalone selling price basis. The standalone selling price is determined based on overall pricing objectives, taking into consideration market conditions, geographic locations and other factors. Other judgments include determining if any variable consideration should be included in the total contract value of the arrangement such as price increases.

Revenue is generally recognized on a gross basis as a principal versus on a net basis as an agent, as we are primarily responsible for fulfilling the contract, bear inventory risk and have discretion in establishing the price when selling to the customer. To the extent we do not meet the criteria for recognizing revenue on a gross basis, we record the revenue on a net basis. Revenue from contract settlements, when a customer wishes to terminate their contract early, is treated as a contract modification and recognized ratably over the remaining term of the contract, if any.

We guarantee certain service levels, such as uptime, as outlined in individual customer contracts. If these service levels are not achieved due to any failure of the physical infrastructure or offerings, or in the event of certain instances of damage to customer infrastructure within our IBX data centers, we would reduce revenue for any credits or cash payments given to the customer. Historically, these credits and cash payments have not been significant.

We enter into revenue contracts with customers for data centers and office spaces, which contain both lease and non-lease components. We elected to adopt the practical expedient which allows lessors to combine lease and non-lease components, by underlying class of asset, and account for them as one component if they have the same timing and pattern of transfer. The combined component is accounted for in accordance with the current lease accounting guidance ("Topic 842") if the lease component is predominant, and in accordance with Topic 606 if the non-lease component is predominant. In general, customer contracts for data centers are accounted for under Topic 606 and customer contracts for the use of office space are accounted for under Topic 842, which are generally classified as operating leases and are recognized on a straight-line basis over the lease term.

Certain customer agreements are denominated in currencies other than the functional currencies of the parties involved. Under applicable accounting rules, we are deemed to have foreign currency forward contracts embedded in these contracts. We assessed these embedded contracts and concluded them to be foreign currency embedded derivatives (see Note 8). These instruments are separated from their host contracts and held on our consolidated balance sheet at their fair value. The majority of these foreign currency embedded derivatives arise in certain of our subsidiaries where the local currency is the subsidiary's functional currency and the customer contract is denominated in the U.S. dollar. Changes in their fair values are recognized within revenues in our consolidated statements of operations.

Contract Balances

The timing of revenue recognition, billings and cash collections result in accounts receivables, contract assets and deferred revenues. A receivable is recorded at the invoice amount, net of an allowance for credit losses and is recognized in the period when we have transferred products or provided services to our customers and when its right to consideration is unconditional. Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 30 to 45 days. In instances where the timing of revenue recognition differs from the timing of invoicing, we have determined that our contracts generally do not include a significant financing component. We assess collectability based on a number of factors, including past transaction history with the customer and the credit-worthiness of the customer. We generally do not request collateral from our customers although in certain cases we obtain a security interest in a customer's equipment placed in our IBX data centers or obtain a deposit. We also maintain an allowance for estimated losses on a lifetime loss basis resulting from the inability of our customers to make required payments for which we had expected to collect the revenues in accordance with the credit loss guidance accounting guidance ("Topic 326"). If the financial condition of our customers were to deteriorate or if they became insolvent, resulting in an impairment of their ability to make payments, greater allowances for credit losses may be required. Management specifically analyzes current economic news, conditions and trends, historical loss rates, customer concentrations, customer credit-worthiness, changes in customer payment terms and any applicable long term forecast when evaluating revenue recognition and the adequacy of our reserves for our accounts receivable. Any amounts that were previously recognized as revenue and subsequently determined to be uncollectable are charged to bad debt expense included in sales and marketing expense in the consolidated statements of operations. A specific bad debt reserve of up to the full amount of a particular invoice value is provided for certain problematic customer balances. An additional reserve is established for all other accounts based on an analysis of historical credits issued. Delinquent account balances are written off after management has determined that the likelihood of collection is not probable.

A contract asset exists when we have transferred products or provided services to our customers but customer payment is conditioned on reasons other than the passage of time, such as upon the satisfaction of additional performance obligations. Certain contracts include terms related to price arrangements such as price increases and free months. We recognize revenues ratably over the contract term, which could potentially give rise to contract assets during certain periods of the contract term. Contract assets are recorded in other current assets and other assets in the consolidated balance sheet.

Deferred revenue (a contract liability) is recognized when we have an unconditional right to a payment before we transfer the products or services to customers. Deferred revenue is included in other current liabilities and other liabilities, respectively, in the consolidated balance sheet.

Contract Costs

Direct and indirect incremental costs solely related to obtaining revenue contracts are capitalized as costs of obtaining a contract, when they are incremental and if they are expected to be recovered. Such costs consist primarily of commission fees and sales bonuses, as well as indirect related payroll costs. In 2022, contract costs were amortized over the estimated period of 5.5 years on a straight-line basis. We elected to apply the practical expedient which allows us to expense contract costs when incurred, if the amortization period is one year or less.

For further information on revenue recognition, see Note 2 below.

Income Taxes

Income taxes are accounted for under the asset and liability method. Under this method, deferred tax assets and liabilities are recognized based on the future tax consequences attributable to differences that exist between the financial statement carrying amounts of assets and liabilities and their respective tax bases, as well as tax attributes such as operating loss, capital loss and tax credits carryforwards on a taxing jurisdiction basis. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the year in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts that are expected more likely than not to be realized in the future. A tax benefit from an uncertain income tax position may be recognized in the financial statements only if it is more likely than not that the position is sustainable, based solely on its technical merits and consideration of the relevant taxing authority's widely understood administrative practices and precedents. Recognized income tax positions are measured at the largest amount that has a greater than 50 percent likelihood of being realized. Any subsequent changes in recognition or measurement are reflected in the period in which the change in judgment occurs.

We elected to be taxed as a REIT for U.S. federal income tax purposes beginning with our 2015 taxable year. As a result, we may deduct the dividends made to our stockholders from taxable income generated by us and that of our qualified REIT subsidiaries ("QRSs"). Our dividends paid deduction generally eliminates the U.S. federal taxable income of our REIT and QRSs, resulting in no U.S. federal income tax due. However, our domestic taxable REIT subsidiaries ("TRSs") are subject to the U.S. corporate income taxes on any taxable income generated by them. In addition, our foreign operations are subject to local income taxes regardless of whether the foreign operations are operated as QRSs or TRSs.

Our qualification and taxation as a REIT depend on our satisfaction of certain asset, income, organizational, distribution, stockholder ownership and other requirements on a continuing basis. Our ability to satisfy quarterly asset tests depends upon our analysis and the fair market values of our REIT and non-REIT assets. For purposes of the quarterly REIT asset tests, we estimate the fair market value of assets within our QRSs and TRSs using a discounted cash flow approach, by calculating the present value of forecasted future cash flows. We apply discount rates based on industry benchmarks relative to the market and forecasting risks. Other significant assumptions used to estimate the fair market value of assets in QRSs and TRSs include projected revenue growth, projected operating margins, and projected capital expenditures. We revisit significant assumptions periodically to reflect any changes due to business or economic environment.

For further information on income taxes, see Note 14 below.

Stock-Based Compensation

Stock-based compensation cost is measured at the grant date for all stock-based awards made to employees and directors based on the fair value of the award. We generally recognize stock-based compensation expense on a straight-line basis over the requisite service period of the awards, which is generally the vesting period. However, for awards with market conditions or performance conditions, stock-based compensation expense is recognized on a straight-line basis over the requisite service period for each vesting tranche of the award. We elected to estimate forfeitures based on historical forfeiture rates.

We grant restricted stock units ("RSUs") or restricted stock awards ("RSAs") to our employees and these equity awards generally have only a service condition. We grant RSUs to our executives that generally have a service and performance condition or a service and market condition. Performance conditions contained in an equity award are generally tied to our financial performance. We assess the probability of meeting these performance conditions on a quarterly basis. The majority of our RSUs vest over four years, although certain equity awards for executives vest over a range of two to four years. Our RSAs vest over three years. The valuation of RSUs and RSAs with only a service condition or a service and performance condition requires no significant assumptions as the fair value for these types of equity awards is based solely on the fair value of our stock price on the date of grant. We use a Monte Carlo simulation option-pricing model to determine the fair value of RSUs with a service and market condition.

We use the Black-Scholes option-pricing model to determine the fair value of our employee stock purchase plan ("ESPP"). The determination of the fair value of shares purchased under the ESPP is affected by assumptions regarding a number of complex and subjective variables including our expected stock price volatility over the term of the awards and actual and projected employee stock purchase behaviors. We estimated the expected volatility by using the average historical volatility of its common stock that it believed was best representative of future volatility. The risk-free interest rate used was based on U.S. Treasury zero-coupon issues with remaining terms similar to the expected term of the equity awards. The expected dividend rate used was based on average dividend yields and the expected term used was equal to the term of each purchase window.

The accounting standard for stock-based compensation does not allow the recognition of unrealized tax benefits associated with the tax deductions in excess of the compensation recorded (excess tax benefit) until the excess tax benefit is realized (i.e., reduces taxes payable). We record the excess tax benefits from stock-based compensation as income tax expense through the statement of operations. For further information on stock-based compensation, see Note 13 below.

Foreign Currency Translation

The financial position of foreign subsidiaries is translated using the exchange rates in effect at the end of the period, while income and expense items are translated at average exchange rates during the period. Gains or losses from translation of foreign operations where the local currency is the functional currency are included as other comprehensive income (loss). The net gains and losses resulting from foreign currency transactions are recorded in net income in the period incurred and recorded within other income (expense). Certain inter-company balances are designated as loans of a long-term investment-type nature. Accordingly, exchange gains and losses associated with these long-term inter-company balances are recorded as a component of other comprehensive income (loss), along with translation adjustments.

Earnings Per Share

We compute basic and diluted EPS for net income. Basic EPS is computed using net income and the weighted-average number of common shares outstanding. Diluted EPS is computed using net income and the weighted-average number of common shares outstanding plus any dilutive potential common shares outstanding. Dilutive potential common shares include the assumed exercise, vesting and issuance activity of employee equity awards using the treasury stock method. For further information on earnings per share, see Note 4 below.

Treasury Stock

We account for treasury stock under the cost method. When treasury stock is re-issued at a higher price than its cost, the difference is recorded as a component of additional paid-in capital to the extent that there are gains to offset the losses. If there are no treasury stock gains in additional paid-in capital, the losses are recorded as a component of retained earnings.

Recent Accounting Pronouncements

Accounting Standards Not Yet Adopted

In September 2022, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2022-04, "Liabilities-Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations". This guidance requires annual and interim disclosures for entities that use supplier finance programs in connection with the purchase of goods and services. The ASU is effective for fiscal years beginning after December 15, 2022, with early adoption permitted, except for the amendment on rollforward information, which is effective for fiscal years beginning after December 15, 2023. We do not expect the adoption of this standard to have a significant impact on our consolidated financial statements.

Accounting Standards Recently Adopted

Financial Instruments - Credit Losses

In June 2016, FASB issued ASU 2016-13, Financial Instruments - Credit Losses ("Topic 326"): Measurement of Credit Losses on Financial Instruments. The ASU requires the measurement of all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. The ASU requires enhanced qualitative and quantitative disclosures to help investors and other financial statement users better understand significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of an organization's portfolio. The ASU is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019, with early adoption permitted. We adopted this new ASU on January 1, 2020 using the modified retrospective approach and recorded a net decrease to retained earnings of $0.9 million and a corresponding increase to allowance for credit losses. The adoption did not have a significant impact on other financial assets within the scope of Topic 326, such as contract assets.

Reference Rate Reform

In March 2020, FASB issued ASU 2020-04, Reference Rate Reform ("Topic 848"): Facilitation of the Effects of Reference Rate Reform on Financial Reporting. In addition, FASB issued ASU 2021-01, Reference Rate Reform ("Topic 848"), which clarifies the scope of Topic 848. Collectively, the guidance provides optional expedients and exceptions for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. ASU 2021-01 is effective upon issuance and ASU 2020-04 was effective for all entities as of March 12, 2020, and together remained effective through December 31, 2022. In December 2022, FASB issued ASU 2022-06, Reference Rate Reform ("Topic 848"): Deferral of the Sunset Date of Topic 848. Because the current relief in Topic 848 may not cover a period of time during which a significant number of modifications may take place, the amendments in this Update defer the sunset date of Topic 848 from December 31, 2022 to December 31, 2024, after which entities will no longer be permitted to apply the relief in Topic 848. We adopted these ASUs upon their respective issuances and there was no impact on our consolidated financial statements as a result of adopting the guidance. We will evaluate our debt, derivative and lease contracts that may become eligible for modification relief and may apply the elections prospectively as needed.

Income Taxes

In December 2019, FASB issued ASU 2019-12, Income Taxes ("Topic 740"): Simplifying the Accounting for Income Taxes. The ASU simplifies accounting for income taxes by removing certain exceptions to the general principles in Topic 740. The ASU also improves consistent application of and simplifies generally accepted accounting principles ("GAAP") for other areas of Topic 740 by clarifying and amending existing guidance. The ASU is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020, with early adoption permitted including adoption in any interim period for periods for which financial statements have not yet been issued. On January 1, 2021, we adopted this ASU on a prospective basis and the adoption of this standard did not have an impact on our consolidated financial statements.

Debt with Conversion and Other Options

In August 2020, FASB issued ASU 2020-06: Debt-Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging-Contracts in Entity's Own Equity (Subtopic 815-40). The ASU simplifies the accounting for convertible instruments by reducing the number of accounting models for convertible debt instruments and convertible preferred stock and modifies the disclosure requirement for the convertible instruments. Additionally, this ASU improves the consistency of EPS calculations by eliminating the use of the treasury stock method to calculate diluted EPS for convertible instruments and clarifies certain areas under the current EPS guidance. The ASU is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2021, with early adoption permitted at the beginning of the fiscal year after December 15, 2020. On January 1, 2022, we adopted this ASU on a prospective basis and the adoption of this standard did not have a material impact on our consolidated financial statements.

Business Combinations

In October 2021, FASB issued ASU 2021-08 Business Combinations ("Topic 805"): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers. The ASU requires contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASC 606, Revenue from Contracts with Customers, as if it had originated the contracts. Under the current business combinations guidance, such assets and liabilities were recognized by the acquirer at fair value on the acquisition date. The ASU is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2022, with early adoption permitted. On April 1, 2022, we early adopted this ASU and the adoption of this standard did not have a material impact on our consolidated financial statements.

2. Revenue

Contract Balances

The following table summarizes the opening and closing balances of our accounts receivable, net; contract assets, current; contract assets, non-current; deferred revenue, current; and deferred revenue, non-current (in thousands):

	Accounts receivable, net [1]	Contract assets, current	Contract assets, non-current	Deferred revenue, current	Deferred revenue, non-current
Beginning balances as of January 1, 2022	$ 681,809	$ 65,392	$ 55,486	$ 109,736	$ 87,495
Closing balances as of December 31, 2022	855,380	27,608	55,405	132,090	155,334
Increase (Decrease)	$ 173,571	$ (37,784)	$ (81)	$ 22,354	$ 67,839
Beginning balances as of January 1, 2021	$ 676,738	$ 13,534	$ 54,050	$ 101,258	$ 71,242
Closing balances as of December 31, 2021	681,809	65,392	55,486	109,736	87,495
Increase	$ 5,071	$ 51,858	$ 1,436	$ 8,478	$ 16,253

[1] The net change in our allowance for credit losses was insignificant during the year ended December 31, 2022.

The difference between the opening and closing balances of our accounts receivable, net, contract assets and deferred revenues primarily results from revenue growth and the timing difference between the satisfaction of our performance obligation and the customer's payment, as well as business combinations closed during the years ended December 31, 2022 and 2021. The amounts of revenue recognized during the years ended December 31, 2022, 2021 and 2020 from the opening deferred revenue balance were $82.8 million, $93.1 million and $87.0 million, respectively. For the years ended December 31, 2022, 2021 and 2020, no impairment loss related to contract balances was recognized in the consolidated statement of operations.

Contract Costs

The ending balances of net capitalized contract costs as of December 31, 2022 and 2021 were $ 371.3 million and $325.5 million, respectively, which were included in other assets in the consolidated balance sheet. $96.0 million, $87.6 million, and $85.4 million of contract costs were amortized during years ended December 31, 2022, 2021, and 2020, respectively, which were included in sales and marketing expense in the consolidated statement of operations.

Remaining performance obligations

As of December 31, 2022, approximately $10.1 billion of total revenues, including deferred installation revenues, are expected to be recognized in future periods. Most of our revenue contracts have an initial term varying from one to three years, and thereafter, automatically renew in one-year increments. Included in the remaining performance obligations are contracts that are either under the initial term or under one-year renewal periods. We expect to recognize approximately 70% of our remaining performance obligations as revenues over the next two years, with more revenues expected to be recognized in the first year due to the impact of contracts renewal. The remainder of the balance is generally expected to be recognized over the next three to five years. We estimate our remaining performance obligations at a point in time. Actual amounts and timing of revenue recognition may differ from these estimates due to changes in actual deployments dates, contract modifications, renewals and/or terminations.

The remaining performance obligations do not include variable consideration related to unsatisfied performance obligations such as the usage of metered power, service fees from xScale™ data centers, which are calculated based on future events or actual costs incurred in the future, or any contracts that could be terminated without any significant penalties such as the majority of interconnection revenues. The remaining performance obligations above include revenues to be recognized in the future related to arrangements where we are considered the lessor.

3. Acquisitions

2022 Acquisitions

Acquisition of Entel Chile Data Centers (the "Entel Chile Acquisition") and Entel Peru Data Center (the "Entel Peru Acquisition")

On May 2, 2022, we further expanded in Latin America through an acquisition of four data centers in Chile from Entel, a leading Chilean telecommunications provider, for a total purchase consideration of $638.3 million at the exchange rate in effect on that date. On August 1, 2022, we completed the acquisition of a data center in Peru from Entel for a total purchase consideration of $80.3 million at the exchange rate in effect on that date. The Entel Chile Acquisition and Entel Peru Acquisition support our ongoing expansion to meet customer demand in the Latin American market.

Acquisition of MainOne (the "MainOne Acquisition")

On April 1, 2022, we completed the acquisition of all outstanding shares of MainOne, consisting of four data centers as well as a subsea cable and terrestrial fiber network. We acquired MainOne and its assets for a total purchase consideration of $278.4 million. The MainOne Acquisition supports our ongoing expansion to meet customer demand in the West African market.

2021 Acquisition

Acquisition of GPX India (the "GPX India Acquisition")

On September 1, 2021, we completed the acquisition of GPX India, representing two data centers in Mumbai, India, for a total purchase consideration of approximately INR12.5 billion, or $170.5 million at the exchange rate in effect on that date. The GPX India Acquisition supports our ongoing expansion to meet customer demand in the Indian market.

Purchase price allocation

Each of the acquisitions noted above constitute a business under the accounting standard for business combinations and, therefore, were accounted for as business combinations using the acquisition method of accounting. Under this method, the total purchase price is allocated to the assets acquired and liabilities assumed measured at fair value on the date of acquisition, except where alternative measurement is required under GAAP.

As of December 31, 2022, we had not completed the detailed valuation analysis to derive the fair value of assets acquired and liabilities assumed from the Entel Peru Acquisition, Entel Chile Acquisition and MainOne Acquisition as it relates to the related tax impacts; therefore, the purchase price allocation is based on provisional estimates and subject to continuing management analysis.

A summary of the final allocation of total purchase consideration is presented as follows (in thousands):

	GPX India	Entel Peru	Entel Chile	MainOne
	Final	Provisional		
Cash and cash equivalents	$ 9,406	$ —	$ —	$ 33,026
Accounts receivable	4,399	—	—	9,431
Other current assets	8,883	—	12,424	21,988
Property, plant and equipment	88,130	13,423	81,132	239,583
Operating lease right-of-use assets	62	—	—	—
Intangible assets	15,408	10,000	153,489	54,800
Goodwill	77,145	46,285	380,867	110,648
Deferred tax and other assets	20	10,801	12,090	6,731
Total assets acquired	203,453	80,509	640,002	476,207
Accounts payable and accrued liabilities	(1,566)	—	(195)	(19,790)
Other current liabilities [(1)]	(478)	—	—	(13,061)
Operating lease liabilities	(62)	—	—	—
Finance lease liabilities	(20,565)	—	—	—
Mortgage and loans payable	—	—	—	(25,944)
Deferred tax and other liabilities [(1)]	(10,317)	(167)	(1,463)	(139,062)
Net assets acquired	$ 170,465	$ 80,342	$ 638,344	$ 278,350

(1) For the MainOne Acquisition, other current liabilities includes $9.9 million of deferred revenue - current and the other liabilities includes $95.4 million of deferred revenue - non-current.

Property, plant and equipment - The fair values of property, plant and equipment acquired from these four acquisitions were estimated by applying the cost approach, with the exception of land, which we estimated by applying the market approach. The key assumptions of the cost approach include replacement cost new, physical deterioration, functional and economic obsolescence, economic useful life, remaining useful life, age and effective age.

Intangible assets - The following table presents certain information on the acquired intangible assets (in thousands):

Intangible Assets	Fair Value	Estimated Useful Lives (Years)	Weighted-average Estimated Useful Lives (Years)	Discount Rate
GPX India:				
Customer relationships [(1)]	$ 15,408	15.0	15.0	11.0 %
Entel Peru:				
Customer relationships [(1)]	10,000	15.0	15.0	7.0 %
Entel Chile:				
Customer relationships [(1)]	153,489	12.0 - 15.0	14.0	8.5% - 9.5%
MainOne:				
Customer relationships [(1)]	51,500	10.0 - 15.0	14.0	11.5 %
Trade names [(2)]	3,300	5.0	5.0	11.5 %

(1) The fair value was estimated by calculating the present value of estimated future operating cash flows generated from existing customers less costs to realize the revenue and/or by using benchmarking. The rates reflect the nature of the assets as they relate to the risk and uncertainty of the estimated future operating cash flows, as well as the risk of the country within which the acquired business operates.

(2) The fair value of the MainOne trade name was estimated using the relief from royalty method under the income approach. We applied a relief from royalty rate of 1.0%.

Goodwill

Goodwill represents the excess of the purchase price over the fair value of the net tangible and intangible assets acquired and liabilities assumed. Goodwill is attributable to the workforce of the acquired business and the projected revenue increase expected to arise from future customers after the acquisition. Goodwill from the GPX India Acquisition is attributable to the Asia-Pacific region and is not deductible for local tax purposes. Goodwill from the Entel Peru and Entel Chile acquisitions are attributable to the Americas region and are not expected to be amortizable for local tax purposes. Goodwill from the MainOne Acquisition is attributable to the EMEA region and is generally not deductible for local tax purposes.

Revenues and net income from operations

The operating results of the Entel Peru and Entel Chile acquisitions are reported in the Americas region and the operating results of the MainOne Acquisition are reported in the EMEA region following the date of acquisition. During the year ended December 31, 2022, our results of operations from these acquisitions included $89.9 million of revenues and $8.2 million net income from operations.

Transaction costs

During the year ended December 31, 2022, the transaction costs for the Entel Chile and Entel Peru acquisitions were $ 7.2 million and the transaction costs for the MainOne acquisition were not significant.

2020 Acquisitions

Acquisition of Bell Data Centers (the "Bell Acquisition")

On October 1, 2020, we completed the acquisition of 12 data center sites across Canada from Bell, with one additional data center in Ottawa Canada acquired on November 2, 2020, for a total combined purchase consideration of approximately C$934.3 million, or $704.0 million at the exchange rates in effect on those dates. The acquisition supports our ongoing expansion to meet customer demand in Canada.

Acquisition of Packet (the "Packet Acquisition")

On March 2, 2020, we acquired all outstanding shares and equity awards of Packet, a leading bare metal automation platform for a total purchase consideration of approximately $290.3 million in cash. In addition, we paid $ 16.1 million in cash to accelerate the vesting of unvested Packet equity awards for certain Packet employees, which was recorded as stock-based compensation expense during the three months ended March 31, 2020. In connection with the acquisition, we also issued restricted stock awards with an aggregated fair value of $30.2 million and a three-year vesting period, which will be recognized as stock-based compensation costs over the vesting period. The acquisition, combined with Equinix Metal™, is expected to accelerate our strategy to help enterprises deploy hybrid multicloud architectures on our data center platform.

Acquisition of data centers from Axtel (the "Axtel Acquisition")

On January 8, 2020, we completed the acquisition of three data centers in Mexico from Axtel for a total purchase consideration of approximately $189.0 million, including $175.0 million in cash and $14.0 million we paid to the seller for recoverable value-added taxes ("VAT") incurred prior to the acquisition, which related to a corresponding VAT receivable acquired upon acquisition. The acquisition supports our ongoing expansion to meet customer demand in our Americas region.

4. Earnings Per Share

The following table sets forth the computation of basic and diluted earnings per share ("EPS") for the years ended December 31 (in thousands, except per share amounts):

	2022	2021	2020
Net income	$ 704,577	$ 499,728	$ 370,074
Net (income) loss attributable to non-controlling interests	(232)	463	(297)
Net income attributable to Equinix	$ 704,345	$ 500,191	$ 369,777
Weighted-average shares used to calculate basic EPS	91,569	89,772	87,700
Effect of dilutive securities:			
Employee equity awards	259	637	710
Weighted-average shares used to calculate diluted EPS	91,828	90,409	88,410
EPS attributable to Equinix:			
Basic EPS	$ 7.69	$ 5.57	$ 4.22
Diluted EPS	$ 7.67	$ 5.53	$ 4.18

The following table sets forth potential shares of common stock that are not included in the diluted EPS calculation above because to do so would be anti-dilutive for the years ended December 31 (in thousands):

	2022	2021	2020
Common stock related to employee equity awards and other	582	206	19
Total	582	206	19

5. Assets Held for Sale

In June 2021, we entered into an agreement to form a joint venture in the form of a limited liability partnership with GIC Private Limited, Singapore's sovereign wealth fund ("GIC"), to develop and operate additional xScale^{TM} data centers in Europe and the Americas (the “EMEA 2 Joint Venture”). xScale data centers are engineered to meet the technical and operational requirements and price points of core hyperscale workload deployments and also offer access to our comprehensive suite of interconnection and edge solutions. The transaction was structured to close in phases over the course of two years, pending regulatory approval and other closing conditions. The assets and liabilities of the Warsaw 4 ("WA4") data center site, which were included within our EMEA region, were classified as held for sale as of June 30, 2021. In June 2022, we sold the WA4 data center in exchange for a total consideration of $61.5 million. During the year ended December 31, 2022, we recognized an insignificant gain on the sale of the WA4 data center.

In October 2021, we entered into an agreement to form a joint venture in the form of a limited liability partnership with PGIM Real Estate ("PGIM"), to develop and operate xScale data centers in Asia-Pacific (the "Asia-Pacific 2 Joint Venture"). The assets and liabilities of the Sydney 9 ("SY9") data center site, which were included within our Asia-Pacific region, were classified as held for sale as of September 30, 2021. Upon closing the joint venture in March 2022, we sold the SY9 data center in exchange for a total consideration of $201.3 million, which was comprised of $165.6 million of net cash proceeds, a 20% partnership interest in the Asia-Pacific 2 Joint Venture with a fair value of $29.8 million, and $5.9 million of receivables. During the year ended December 31, 2022, we recognized an insignificant loss on the sale of the SY9 data center.

In March 2022, we entered into an agreement to sell the Mexico 3 ("MX3") data center site in connection with the formation of a new joint venture with GIC (the "AMER 1 Joint Venture") to develop and operate xScale data centers in the Americas. Given that the key terms of the sale had been substantially agreed upon as of September 30, 2021, the assets and liabilities of the MX3 data center, which are currently included within our Americas region, were classified as held for sale as of September 30, 2021 and remained held for sale as of December 31, 2022.

All assets and liabilities classified as held for sale are reported at the lower of their carrying amounts or fair values less costs to sell. The following table summarizes the assets and liabilities that were classified as assets and liabilities held for sale in the consolidated balance sheets as of December 31, 2022 and 2021 (in thousands):

	December 31, 2022	December 31, 2021
Operating lease right-of-use assets	$ —	$ 12,835
Property, plant and equipment	81,368	260,182
Other assets	2,948	3,178
Total assets held for sale	$ 84,316	$ 276,195
Accounts payable and accrued expenses	$ —	$ 510
Current portion of operating lease liabilities	—	2,039
Operating lease liabilities, less current portion	—	348
Accrued property, plant and equipment	10,480	18,127
Total liabilities held for sale [(1)]	$ 10,480	$ 21,024

(1) Liabilities held for sale were included within other current liabilities on the consolidated balance sheet.

Sale of xScale^{TM} data center facilities in 2021

As noted above, in June 2021, we entered into an agreement to form the EMEA 2 Joint Venture with GIC. The assets and liabilities of the data center sites that were expected to be sold to the EMEA 2 Joint Venture within a year were classified as held for sale as of June 30, 2021. The first phase of the transaction, comprised of data center sites located in Frankfurt, Helsinki, Madrid, Milan and Paris, closed in September 2021. Upon closing, we sold these data center sites in exchange for a total consideration of $144.0 million, which was comprised of $106.4 million of net cash proceeds, a 20% partnership interest in the EMEA 2 Joint Venture with a fair value of $30.4 million, and $7.2 million of receivables. During the year ended December 31, 2021, we recognized an insignificant gain on the sale of these xScale data center facilities. In October 2021, we completed the sale of the Sao Paulo 5 ("SP5") data center to the EMEA 2 Joint Venture in exchange for a total consideration of $34.3 million. During the year ended December 31, 2021, we recognized an insignificant loss on the sale of the SP5 data center.

In May 2021, we entered into an agreement to sell the Dublin 5 ("DB5") data center site to the EMEA 1 Joint Venture (as defined in Note 6 below). The assets and liabilities of the DB5 data center, which were included within our EMEA region, were classified as held for sale as of June 30, 2021. In July 2021, we sold the DB5 data center in exchange for a total consideration of $77.9 million. During the year ended December 31, 2021, we recognized a total gain of $15.8 million on the sale of the DB5 data center.

6. Equity Method Investments

We hold various equity method investments, primarily joint venture or partnership arrangements, in order to invest in certain entities that are in line with our business development objectives, including the development and operation of xScale data centers. Some of these xScale joint ventures are classified as VIEs, as discussed further below. The Asia-Pacific 1, Asia-Pacific 2, Asia-Pacific 3 and EMEA 2 Joint Ventures (the "VIE Joint Ventures") share a similar purpose, design and nature of assets. The following table summarizes our equity method investments (in thousands), which were included in other assets on the consolidated balance sheets as of December 31 (in thousands):

Investee	Ownership Percentage	2022	2021
EMEA 1 Joint Venture with GIC	20 %	$ 148,895	$ 131,516
VIE Joint Ventures	20 %	191,680	95,052
Other	Various	7,570	18,481
Total		$ 348,145	$ 245,049

Non - VIE Joint Venture

EMEA 1 Joint Venture

In 2019, we entered into a joint venture in the form of a limited liability partnership with GIC (the "EMEA 1 Joint Venture"), to develop and operate xScale data centers in Europe. The EMEA 1 Joint Venture is not a VIE given that both equity investors' interests have the characteristics of a controlling financial interest and it is sufficiently capitalized to sustain its operations, requiring additional funding from its partners only when expanding operations. Our share of income and losses of equity method investments from this joint venture was insignificant for the years ended December 31, 2022 and 2021 and was included in other income (expense) on the consolidated statement of operations.

We committed to make future equity contributions to the EMEA 1 Joint Venture for funding its future development. As of December 31, 2022, we had future equity contribution commitments of $11.3 million.

VIE Joint Ventures

In 2020, we entered into a second joint venture in the form of a limited liability partnership with GIC (the "Asia-Pacific 1 Joint Venture") to develop and operate xScale data centers in Asia-Pacific.

In 2021, we entered into the EMEA 2 Joint Venture with GIC to develop and operate additional xScale data centers in Europe and the Americas (see Note 5 above).

On March 11, 2022, we entered into the Asia-Pacific 2 Joint Venture with PGIM to develop and operate additional xScale data centers in Asia-Pacific (see Note 5 above).

On April 6, 2022, we entered into a joint venture in the form of a limited liability partnership with GIC (the "Asia-Pacific 3 Joint Venture") to develop and operate additional xScale data centers in Seoul, Korea. Upon closing, we contributed $17.0 million in exchange for a 20% partnership interest in the joint venture.

The VIE Joint Ventures are considered VIEs because they do not have sufficient funds from operations to be self-sustaining. While we provide certain management services to their operations and earn fees for the performance of such services, the power to direct the activities of these joint ventures that most significantly impact economic performance is shared equally between us and either GIC or PGIM, as applicable. These activities include data center construction and operations, sales and marketing, financing, and real estate purchases or sales. Decisions about these activities require the consent of both Equinix and either GIC or PGIM, as applicable. We concluded that neither party is deemed to have predominant control over the VIE Joint Ventures and neither party is considered to be the primary beneficiary. Our share of income of equity method investments from these joint ventures was $8.6 million for the year ended December 31, 2022 and was not significant for the year ended December 31, 2021 and was included in other income (expense) on the consolidated statement of operations.

The following table summarizes our maximum exposure to loss related to the VIE Joint Ventures as of December 31, 2022 (in thousands):

	VIE Joint Ventures
Equity Investment	$ 191,680
Outstanding Receivables	19,935
Future Equity Contribution Commitments (1)	49,993
Maximum Future Payments under Debt Guarantees (2)	89,308
Total	$ 350,916

(1) The joint ventures' partners are required to make additional equity contributions proportionately upon certain occurrences, such as a shortfall in capital necessary to complete certain construction phases or make interest payments on their outstanding debt.

(2) In connection with our 20% equity investment in the EMEA 2 Joint Venture, we provided the lenders with our guarantees covering 20% of all payments of principal and interest due under EMEA 2 Joint Venture's credit facility agreements (see Note 15).

7. Balance Sheet Components

Cash, and Cash Equivalents

Cash and cash equivalents consisted of the following as of December 31 (in thousands):

	2022	2021
Cash and cash equivalents:		
Cash	$ 1,141,793	$ 950,677
Cash equivalents:		
Money market funds	764,628	585,681
Total cash and cash equivalents	$ 1,906,421	$ 1,536,358

As of December 31, 2022 and 2021, cash and cash equivalents included investments which were readily convertible to cash and had original maturity dates of 90 days or less.

Accounts Receivable

Trade accounts receivable are recorded at the invoiced amount and generally do not bear interest. Accounts receivable, net, consisted of the following as of December 31 (in thousands):

	2022	2021
Accounts receivable	$ 867,605	$ 693,444
Allowance for credit losses	(12,225)	(11,635)
Accounts receivable, net	$ 855,380	$ 681,809

The following table summarizes the activity of our allowance for credit losses (in thousands):

Balance as of December 31, 2019	$ 13,026
Adjustments due to adoption of ASU 2016-13	900
Provision for credit losses	5,069
Net write-offs	(10,050)
Impact of foreign currency exchange	1,732
Balance as of December 31, 2020	10,677
Provision for credit losses	10,016
Net write-offs	(8,295)
Impact of foreign currency exchange	(763)
Balance as of December 31, 2021	11,635
Provision for credit losses	7,426
Net write-offs	(6,356)
Impact of foreign currency exchange	(480)
Balance as of December 31, 2022	$ 12,225

Other Current Assets

Other current assets consisted of the following as of December 31 (in thousands):

	2022	2021
Prepaid expenses	$ 79,191	$ 65,224
Taxes receivable	122,166	128,123
Restricted cash, current	1,734	12,188
Other receivables	109,948	59,224
Derivative instruments	105,693	117,432
Contract assets, current	27,608	65,392
Other current assets	12,798	15,156
Total other current assets	$ 459,138	$ 462,739

Property, Plant and Equipment, Net

Property, plant and equipment, net consisted of the following as of December 31 (in thousands):

	2022	2021
Core systems	$ 11,616,863	$ 10,808,417
Buildings	8,013,672	7,381,644
Leasehold improvements	1,991,060	2,022,617
Construction in progress	1,195,042	967,562
Personal property [(1)]	1,912,861	1,551,642
Land	1,252,993	970,982
	25,982,491	23,702,864
Less accumulated depreciation	(9,332,957)	(8,257,089)
Property, plant and equipment, net	$ 16,649,534	$ 15,445,775

(1) Personal property included $1.6 billion and $1.2 billion of capitalized internal-use software as of December 31, 2022 and 2021, respectively.

Goodwill and Other Intangibles

The following table presents goodwill and other intangible assets, net, for the years ended December 31, 2022 and 2021 (in thousands):

	2022	2021
Goodwill:		
Americas	$ 2,630,752	$ 2,210,009
EMEA	2,377,921	2,472,586
Asia-Pacific	645,544	689,476
	$ 5,654,217	$ 5,372,071
Intangible assets, net:		
Intangible assets - customer relationships	$ 2,885,152	$ 2,841,372
Intangible assets - trade names	14,719	11,471
Intangible assets - in-place leases	22,183	32,760
Intangible assets - licenses	9,697	9,697
Intangible assets - at-the-money lease contracts	56,822	60,455
Intangible assets - other	8,029	12,546
	2,996,602	2,968,301
Accumulated amortization - customer relationships	(1,056,844)	(987,462)
Accumulated amortization - trade names	(4,561)	(3,207)
Accumulated amortization - in-place leases	(15,797)	(22,847)
Accumulated amortization - licenses	(6,467)	(5,821)
Accumulated amortization - at the money lease contracts	(10,056)	(5,553)
Accumulated amortization - other	(5,228)	(8,144)
	(1,098,953)	(1,033,034)
Total intangible assets, net	$ 1,897,649	$ 1,935,267

Changes in the carrying amount of goodwill by geographic regions are as follows (in thousands):

	Americas	EMEA	Asia-Pacific	Total
Balance as of December 31, 2020	$ 2,212,782	$ 2,611,166	$ 648,605	$ 5,472,553
Purchase of GPX	—	—	77,162	77,162
Impact of foreign currency exchange	(2,773)	(138,580)	(36,291)	(177,644)
Balance as of December 31, 2021	$ 2,210,009	$ 2,472,586	$ 689,476	$ 5,372,071
Purchase of MainOne	—	110,648	—	110,648
Purchase of Entel Chile	380,867	—	—	380,867
Purchase of Entel Peru	46,285	—	—	46,285
Impact of foreign currency exchange	(6,409)	(205,313)	(43,932)	(255,654)
Balance as of December 31, 2022	$ 2,630,752	$ 2,377,921	$ 645,544	$ 5,654,217

Changes in the net book value of intangible assets by geographic regions are as follows (in thousands):

	Americas	EMEA	Asia-Pacific	Total
Balance as of December 31, 2019	$ 1,443,292	$ 466,564	$ 192,533	$ 2,102,389
Axtel acquisition	22,750	—	—	22,750
Packet acquisition	58,500	—	—	58,500
Bell acquisition	75,631	—	—	75,631
Other asset acquisition	—	64,905	—	64,905
Amortization of intangibles	(133,608)	(49,417)	(16,022)	(199,047)
Impact of foreign currency exchange	(3,476)	35,975	13,318	45,817
Balance as of December 31, 2020	1,463,089	518,027	189,829	2,170,945
GPX acquisition	—	—	15,472	15,472
Amortization of intangibles	(133,289)	(55,807)	(16,388)	(205,484)
Impact of foreign currency exchange	(2,047)	(30,278)	(13,341)	(45,666)
Balance as of December 31, 2021	1,327,753	431,942	175,572	1,935,267
Entel Chile acquisition	153,489	—	—	153,489
Entel Peru acquisition	10,000	—	—	10,000
MainOne acquisition	—	54,800	—	54,800
Amortization of intangibles	(137,358)	(52,283)	(15,114)	(204,755)
Impact of foreign currency exchange	(3,570)	(33,052)	(14,530)	(51,152)
Balance as of December 31, 2022	$ 1,350,314	$ 401,407	$ 145,928	$ 1,897,649

Goodwill and intangible assets which are denominated in currencies other than the U.S. Dollar are subject to foreign currency fluctuations. Our foreign currency translation gains and losses, including goodwill and intangibles, are a component of other comprehensive income and loss.

Estimated future amortization expense related to these intangibles is as follows (in thousands):

Years ending:	
2023	$ 206,596
2024	205,550
2025	203,259
2026	202,658
2027	201,711
Thereafter	877,875
Total	$ 1,897,649

Other Assets

Other assets consisted of the following as of December 31 (in thousands):

	2022	2021
Deferred tax assets, net	$ 44,628	$ 59,816
Prepaid expenses [1]	150,617	87,758
Debt issuance costs, net	6,831	2,130
Deposits	64,337	70,548
Restricted cash	93	908
Derivative instruments	298,899	59,917
Contract assets, non-current	55,405	55,486
Contract costs	371,306	325,510
Equity method investments	348,145	245,049
Other assets	35,876	18,944
Total other assets	$ 1,376,137	$ 926,066

(1) Prepaid expenses included $84.2 million and $46.0 million of capitalized CCA implementation costs, net as of December 31, 2022 and 2021, respectively.

Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses consisted of the following as of December 31 (in thousands):

	2022	2021
Accounts payable	$ 115,953	$ 84,084
Accrued compensation and benefits	413,135	364,783
Accrued interest	85,052	81,893
Accrued taxes [1]	131,376	117,061
Accrued utilities and security	115,119	94,251
Accrued other	144,165	137,072
Total accounts payable and accrued expenses	$ 1,004,800	$ 879,144

(1) Accrued taxes included income taxes payable of $55.2 million and $51.3 million as of December 31, 2022 and 2021, respectively.

Other Current Liabilities

Other current liabilities consisted of the following as of December 31 (in thousands):

	2022	2021
Deferred revenue, current	$ 132,090	$ 109,736
Customer deposits	15,896	16,380
Derivative instruments	24,868	13,373
Dividends payable, current	12,302	12,027
Asset retirement obligations	8,657	8,756
Other current liabilities	57,533	54,247
Total other current liabilities	$ 251,346	$ 214,519

Other Liabilities

Other liabilities consisted of the following as of December 31 (in thousands):

	2022	2021
Asset retirement obligations	$ 109,508	$ 108,800
Deferred tax liabilities, net	383,359	340,287
Deferred revenue, non-current	155,334	87,495
Accrued taxes	59,806	124,032
Dividends payable, non-current	10,446	9,750
Customer deposits	4,998	1,534
Derivative instruments	8,820	20,899
Other liabilities	65,592	70,614
Total other liabilities	$ 797,863	$ 763,411

The following table summarizes the activities of our asset retirement obligation ("ARO") (in thousands):

Asset retirement obligations as of December 31, 2019	$ 102,415
Additions	5,909
Adjustments [1]	(4,241)
Accretion expense	6,331
Impact of foreign currency exchange	3,355
Asset retirement obligations as of December 31, 2020	113,769
Additions	7,483
Adjustments [1]	(6,591)
Accretion expense	6,518
Impact of foreign currency exchange	(3,623)
Asset retirement obligations as of December 31, 2021	117,556
Additions	2,951
Adjustments [1]	(4,281)
Accretion expense	6,431
Impact of foreign currency exchange	(4,492)
Asset retirement obligations as of December 31, 2022	$ 118,165

(1) The ARO adjustments are primarily due to lease amendments and acquisition of real estate assets, as well as other adjustments.

8. Derivatives and Hedging Instruments

Derivatives Designated as Hedging Instruments

Net Investment Hedges. We are exposed to the impact of foreign exchange rate fluctuations on the value of investments in our foreign subsidiaries whose functional currencies are other than the U.S. Dollar. In order to mitigate the impact of foreign currency exchange rates, we have entered into various foreign currency debt obligations, which are designated as hedges against our net investments in foreign subsidiaries. As of both December 31, 2022 and 2021, the total principal amounts of foreign currency debt obligations designated as net investment hedges was $1.5 billion.

We also utilize cross-currency interest rate swaps, designated as net investment hedges, which effectively convert a portion of our U.S. dollar-denominated fixed-rate debt to foreign currency-denominated fixed-rate debt, to hedge the currency exposure associated with our net investment in our foreign subsidiaries. As of December 31, 2022 and 2021, the total notional amount of cross-currency interest rate swaps, designated as net investment hedges, were $ 3.9 billion and $4.0 billion respectively, with maturity dates ranging through 2026.

From time to time, we use foreign currency forward contracts, which are designated as net investment hedges, to hedge against the effect of foreign exchange rate fluctuations on our net investment in our foreign subsidiaries. As of December 31, 2022 and 2021, the total notional amount of foreign currency forward contracts designated as net investment hedges were $373.4 million and $375.7 million, respectively.

Certain of our customer agreements that are priced in currencies different from the functional or local currencies of the parties involved are deemed to have foreign currency forward contracts embedded in them. These embedded derivatives are separated from their host contracts and carried on our balance sheet at their fair value. The majority of these embedded derivatives arise as a result of our foreign subsidiaries pricing their customer contracts in U.S. Dollars. We use these forward contracts embedded within our customer agreements to hedge against the effect of foreign exchange rate fluctuations on our net investment in our foreign subsidiaries.

The effect of net investment hedges on accumulated other comprehensive income and the consolidated statements of operations for the years ended December 31, 2022, 2021 and 2020 was as follows (in thousands):

Amount of gain or (loss) recognized in accumulated other comprehensive income:

	Years Ended December 31,		
	2022	2021	2020
Foreign currency debt	$ 160,286	$ 93,945	$ (208,281)
Cross-currency interest rate swaps (included component) (1)	276,350	282,935	(218,843)
Cross-currency interest rate swaps (excluded component) (2)	(35,723)	(52,517)	(347)
Foreign currency forward contracts (included component) (1)	27,323	2,621	(17,115)
Foreign currency forward contracts (excluded component) (3)	(2,535)	(2)	32
Total	$ 425,701	$ 326,982	$ (444,554)

Amount of gain or (loss) recognized in earnings:

		Years Ended December 31,		
	Location of gain or (loss)	2022	2021	2020
Cross-currency interest rate swaps (excluded component) (2)	Interest expense	$ 50,188	$ 44,933	$ 27,196
Foreign currency forward contracts (excluded component) (3)	Interest expense	(469)	242	42
Total		$ 49,719	$ 45,175	$ 27,238

(1) Included component represents foreign exchange spot rates.
(2) Excluded component represents cross-currency basis spread and interest rates.
(3) Excluded component represents foreign currency forward points.

Cash Flow Hedges. We hedge our foreign currency transaction exposure for forecasted revenues and expenses in our EMEA region between the U.S. Dollar and the British Pound, Euro, Swedish Krona and Swiss Franc. The foreign currency forward and option contracts that we use to hedge this exposure are designated as cash flow hedges. As of December 31, 2022 and 2021, the total notional amounts of these foreign exchange contracts were $490.8 million and $831.2 million, respectively.

As of December 31, 2022, our foreign currency cash flow hedge instruments had maturity dates ranging from January 2023 to February 2024 and we had a net gain of $8.2 million recorded within accumulated other comprehensive income (loss) to be reclassified to revenues and expenses relating to these cash flow hedges as they mature in the next 12 months. As of December 31, 2021, our foreign currency cash flow hedge instruments had maturity dates ranging from January 2022 to December 2023 and we had a net gain of $13.3 million recorded within accumulated other comprehensive income (loss) to be reclassified to revenues and expenses relating to these cash flow hedges as they mature in the next 12 months.

We enter into intercompany hedging instruments ("intercompany derivatives") with our wholly-owned subsidiaries in order to hedge certain forecasted revenues and expenses denominated in currencies other than the U.S. Dollar. Simultaneously, we enter into derivative contracts with unrelated third parties to externally hedge the net exposure created by such intercompany derivatives.

We hedge the interest rate exposure created by anticipated fixed rate debt issuances through the use of treasury locks and swap locks (collectively, interest rate locks), which are designated as cash flow hedges. As of December 31, 2022, we had no interest rate locks outstanding. As of December 31, 2021, the total notional amount of interest rate locks outstanding was $800.0 million. During the year ended December 31, 2022, interest rate locks with a combined aggregate notional amount of $800.0 million were settled related to the issuance of senior notes during the year. When interest rate locks are settled, any gain or loss from the transactions is deferred and included as a component of other comprehensive income (loss) and is amortized to interest expense over the term of the forecasted hedged transaction which is equivalent to the term of the interest rate locks. As of December 31, 2022 and 2021, we had a net gain of $1.4 million and a net loss of $3.9 million, respectively, recorded within accumulated other comprehensive income (loss) to be reclassified to interest expense in the next 12 months for interest rate locks.

We also use cross-currency swaps, which are designated as cash flow hedges, to manage the foreign currency exposure associated with a portion of our foreign currency-denominated debt. As of December 31, 2022 and 2021, the total notional amount of cross-currency interest rate swaps, designated as cash flow hedges, were $280.3 million and $0, respectively.

The effect of cash flow hedges on accumulated other comprehensive income and the consolidated statements of operations for the years ended December 31, 2022, 2021 and 2020 was as follows (in thousands):

Amount of gain or (loss) recognized in accumulated other comprehensive income:

	Years Ended December 31,		
	2022	2021	2020
Foreign currency forward and option contracts (included component) [1]	$ (8,711)	$ 67,767	$ (68,573)
Foreign currency option contracts (excluded component) [2]	—	151	1,655
Cross-currency interest rate swaps	(2,386)	—	—
Interest rate locks	49,392	9,624	(30,393)
Total	$ 38,295	$ 77,542	$ (97,311)

Amount of gain or (loss) reclassified from accumulated other comprehensive income to income:

		Years Ended December 31,		
	Location of gain or (loss)	2022	2021	2020
Foreign currency forward contracts	Revenues	$ 148,100	$ (39,297)	$ 37,198
Foreign currency forward contracts	Costs and operating expenses	(71,968)	20,496	(19,890)
Interest rate locks	Interest Expense	(26)	(4,056)	(1,204)
Total		$ 76,106	$ (22,857)	$ 16,104

Amount of gain or (loss) excluded from effectiveness testing and included in income:

		Years Ended December 31,		
	Location of gain or (loss)	2022	2021	2020
Foreign currency option contracts (excluded component) [2]	Revenues	$ —	$ (244)	$ (1,761)
Total		$ —	$ (244)	$ (1,761)

(1) Included component represents foreign exchange spot rates.
(2) Excluded component represents option's time value.

Derivatives Not Designated as Hedging Instruments

Embedded Derivatives. As described above, certain of our customer agreements that are priced in currencies different from the functional or local currencies of the parties involved are deemed to have foreign currency forward contracts embedded in them..

Economic Hedges of Embedded Derivatives. We use foreign currency forward contracts to manage the foreign exchange risk associated with our customer agreements that are priced in currencies different from the functional or local currencies of the parties involved ("economic hedges of embedded derivatives"). Foreign currency forward contracts represent agreements to exchange the currency of one country for the currency of another country at an agreed-upon price on an agreed-upon settlement date.

Foreign Currency Forward Contracts. We also use foreign currency forward contracts to manage the foreign exchange risk associated with certain foreign currency-denominated monetary assets and liabilities. As a result of foreign currency fluctuations, the U.S. Dollar equivalent values of our foreign currency-denominated monetary assets and liabilities change. Gains and losses on these contracts are included in other income (expense), on a net basis, along with the foreign currency gains and losses of the related foreign currency-denominated monetary assets and liabilities associated with these foreign currency forward contracts. As of December 31, 2022 and 2021, the total notional amounts of these foreign currency contracts were $3.0 billion and $3.3 billion, respectively.

The following table presents the effect of derivatives not designated as hedging instruments in our consolidated statements of operations (in thousands):

Amount of gain or (loss) recognized in earnings:

		Years Ended December 31,		
	Location of gain or (loss)	**2022**	**2021**	**2020**
Embedded derivatives	Revenues	$ (568)	$ 3,503	$ (3,043)
Economic hedge of embedded derivatives	Revenues	(984)	(5,937)	2,142
Foreign currency forward contracts	Other income (expense)	137,633	129,496	(127,648)
Total		$ 136,081	$ 127,062	$ (128,549)

Fair Value of Derivative Instruments

The following table presents the fair value of derivative instruments recognized in our consolidated balance sheets as of December 31, 2022 and 2021 (in thousands):

	December 31, 2022		December 31, 2021	
	Assets [1]	Liabilities [2]	Assets [1]	Liabilities [2]
Designated as hedging instruments:				
Cash flow hedges				
Foreign currency forward and option contracts	$ 27,812	$ 21,352	$ 22,866	$ 7,618
Cross-currency interest rate swaps	19,239	—	—	—
Interest rate locks	—	—	8,662	—
Net investment hedges				
Cross-currency interest rate swaps	274,234	—	56,921	19,441
Foreign currency forward contracts	25,077	4,805	156	70
Total designated as hedging	346,362	26,157	88,605	27,129
Not designated as hedging instruments:				
Embedded derivatives	—	—	3,247	652
Economic hedges of embedded derivatives	—	—	2,232	637
Foreign currency forward contracts	58,230	7,531	83,265	5,854
Total not designated as hedging	58,230	7,531	88,744	7,143
Total Derivatives	$ 404,592	$ 33,688	$ 177,349	$ 34,272

[1] As presented in our consolidated balance sheets within other current assets and other assets.
[2] As presented in our consolidated balance sheets within other current liabilities and other liabilities.

Offsetting Derivative Assets and Liabilities

We enter into master netting agreements with our counterparties for transactions other than embedded derivatives to mitigate credit risk exposure to any single counterparty. Master netting agreements allow for individual derivative contracts with a single counterparty to offset in the event of default. For presentation on the consolidated balance sheets, we do not offset fair value amounts recognized for derivative instruments or the accrued interest related to cross-currency interest rate swaps under master netting arrangements. The following table presents information related to these offsetting arrangements as of December 31, 2022 and 2021 (in thousands):

	Gross Amounts Offset in Consolidated Balance Sheet				
	Gross Amounts	Gross Amounts Offset in the Balance Sheet	Net Amounts	Gross Amounts not Offset in the Balance Sheet	Net
December 31, 2022					
Derivative assets	$ 424,516	$ —	$ 424,516	$ (34,429)	$ 390,087
Derivative liabilities	39,234	—	39,234	(34,429)	4,805
December 31, 2021					
Derivative assets	$ 207,037	$ —	$ 207,037	$ (47,538)	$ 159,499
Derivative liabilities	49,326	—	49,326	(47,538)	1,788

9. Fair Value Measurements

Valuation Methods

Fair value estimates are made as of a specific point in time based on methods using the market approach valuation method which uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities or other valuation techniques. These techniques involve uncertainties and are affected by the assumptions used and the judgments made regarding risk characteristics of various financial instruments, discount rates, estimates of future cash flows, future expected loss experience and other factors.

Cash Equivalents. The fair value of our investments in money market funds approximates their face value. Such instruments are included in cash equivalents. Our money market funds are classified within Level 1 of the fair value hierarchy because they are valued using quoted prices for identical instruments in active markets. The fair value of our other investments, including certificates of deposit, approximates their face value. The fair value of these investments is priced based on the quoted market price for similar instruments or nonbinding market prices that are corroborated by observable market data. We determine the fair values of our Level 2 investments by using inputs such as actual trade data, benchmark yields, broker/dealer quotes and other similar data, which are obtained from quoted market prices, custody bank, third-party pricing vendors or other sources. We use such pricing data as the primary input to make its assessments and determinations as to the ultimate valuation of our investment portfolio and has not made, during the periods presented, any material adjustments to such inputs. We are responsible for our consolidated financial statements and underlying estimates.

We use the specific identification method in computing realized gains and losses. Realized gains and losses from the sale of investments are included within other income (expense) in our consolidated statements of operations. Our investments in publicly traded equity securities are carried at fair value. Unrealized gains and losses on publicly traded equity securities are reported within other income (expense) in our consolidated statements of operations.

Derivative Assets and Liabilities. Inputs used for valuations of derivatives are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant inputs are observable in the market or can be corroborated by observable market data. The significant inputs used include spot currency rates and forward points, interest rate curves, and published credit default swap rates of its foreign exchange trading counterparties and other comparable companies. We have determined that the inputs used to value its derivatives fall within Level 2 of the fair value hierarchy, therefore the derivatives are categorized as Level 2.

Other than the assets and liabilities that were classified as held for sale as described in Note 5 above, we did not have any nonfinancial assets or liabilities measured at fair value on a recurring basis during the years ended December 31, 2022 and 2021.

Our financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2022 were as follows (in thousands):

	Fair Value at December 31, 2022	Fair Value Measurement Using	
		Level 1	Level 2
Assets:			
Money market and deposit accounts	$ 764,628	$ 764,628	$ —
Derivative instruments [1]	404,592	—	404,592
	$ 1,169,220	$ 764,628	$ 404,592
Liabilities:			
Derivative instruments [1]	$ 33,688	$ —	$ 33,688

(1) Amounts are included within other current assets, other assets, other current liabilities and other liabilities in the consolidated balance sheets.

Our financial assets and liabilities measured at fair value on a recurring basis at December 31, 2021 were as follows (in thousands):

	Fair Value at December 31, 2021	Fair Value Measurement Using	
		Level 1	Level 2
Assets:			
Money market and deposit accounts	$ 585,681	$ 585,681	$ —
Derivative instruments [(1)]	177,349	—	177,349
	$ 763,030	$ 585,681	$ 177,349
Liabilities:			
Derivative instruments [(1)]	$ 34,272	$ —	$ 34,272

(1) Amounts are included within other current assets, other assets, other current liabilities and other liabilities in the consolidated balance sheets.

We did not have any Level 3 financial assets or financial liabilities during the years ended December 31, 2022 and 2021.

10. Leases

Significant Lease Transactions

The following table summarizes the significant lease transactions during the year ended December 31, 2022 (in thousands):

					Net Incremental [(1)]	
Lease	Quarter	Transaction	Renewal/Termination Options Excluded [(1)]	Lease Classification	ROU assets	ROU liabilities
Atlanta 1 ("AT1") data center lease extended & expansion [(2)]	Q1	Extended lease term by 12 years with additional three 10-year renewal options	Two 10-year renewal options	Finance Lease	$71,994	$72,549
				Operating Lease	(1,836)	(2,391)
Hong Kong 6 ("HK6") new land and building construction site	Q2	New lease with a 15 year term	5-year renewal option	Operating Lease	195,245	195,245
Hong Kong 2 ("HK2") data center lease renewal	Q2	Exercised the 3-year renewal option for Phase 1 & 2 [(3)]	Two 3-year renewal option	Operating Lease	81,504	81,504
New York 3 ("NY3") data center lease amendment	Q4	26 year lease term after modification to remove early termination option	One 20-year renewal option and one 5-year renewal option	Finance Lease	140,215	140,215

(1) The net incremental amounts represent the adjustments to the right of use ("ROU") assets and liabilities recorded during the quarter that the transactions were entered.

(2) This lease had components previously classified as operating leases.

(3) The incremental balance includes the impact of reassessing lease terms of complementary leases within HK2, resulting in new lease end dates ranging from June 2030 to October 2031 from including renewal options that are reasonably certain to be exercised.

Lease Expenses

The components of lease expenses are as follows (in thousands):

	Years Ended December 31,	
	2022	2021
Finance lease cost		
Amortization of right-of-use assets [(1)]	$ 161,061	$ 157,057
Interest on lease liabilities	112,518	117,896
Total finance lease cost	273,579	274,953
Operating lease cost	213,619	221,776
Variable lease cost	41,237	33,066
Total lease cost	$ 528,435	$ 529,795

(1) Amortization of right-of-use assets is included within depreciation expense, and is recorded within cost of revenues, sales and marketing and general and administrative expenses in the consolidated statements of operations.

Other Information

Other information related to leases is as follows (in thousands, except years and percent):

	Years Ended December 31,	
	2022	2021
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from finance leases	$ 109,514	$ 113,571
Operating cash flows from operating leases	197,356	258,719
Financing cash flows from finance leases	134,202	165,539
Right-of-use assets obtained in exchange for lease obligations: [(1)]		
Finance leases	$ 293,858	$ 412,214
Operating leases	355,040	10,446

	As of December 31,	
	2022	2021
Weighted-average remaining lease term - finance leases [(2)]	15 years	14 years
Weighted-average remaining lease term - operating leases [(2)]	12 years	12 years
Weighted-average discount rate - finance leases	6 %	7 %
Weighted-average discount rate - operating leases	4 %	4 %
Finance lease ROU assets [(3)]	$ 2,018,070	$ 1,875,696

(1) Represents all non-cash changes in ROU assets.
(2) Includes lease renewal options that are reasonably certain to be exercised.
(3) As of December 31, 2022 and 2021, we recorded accumulated amortization of finance lease assets of $840.0 million and $726.4 million, respectively. Finance lease assets are recorded within property, plant and equipment, net on the consolidated balance sheets.

Maturities of Lease Liabilities

Maturities of lease liabilities as of December 31, 2022 are as follows (in thousands):

Year ended December 31,	Operating Leases	Finance Leases	Total
2023	$ 181,461	$ 263,052	$ 444,513
2024	190,939	257,457	448,396
2025	185,430	276,825	462,255
2026	182,117	245,798	427,915
2027	158,465	248,767	407,232
Thereafter	1,010,606	2,191,044	3,201,650
Total lease payments	1,909,018	3,482,943	5,391,961
Less imputed interest	(496,668)	(1,187,833)	(1,684,501)
Total	$ 1,412,350	$ 2,295,110	$ 3,707,460

We entered into agreements with various landlords primarily to lease data center spaces and ground leases which have not yet commenced as of December 31, 2022. These leases will commence between year 2023 and 2025, with lease terms of 2 to 26 years and total lease commitments of approximately $424.7 million.

11. Debt Facilities

Mortgage and Loans Payable

As of December 31, 2022 and 2021, our mortgage and loans payable consisted of the following (in thousands):

	2022	2021
Term loans	$ 619,090	$ 549,697
Mortgage payable and loans payable	34,527	68,691
	653,617	618,388
Less amount representing unamortized debt discount and debt issuance cost	(1,062)	(354)
Add amount representing unamortized mortgage premium	—	1,630
	652,555	619,664
Less current portion	(9,847)	(33,087)
	$ 642,708	$ 586,577

Senior Credit Facility and Refinancing

In 2017, we entered into a credit agreement (the "2017 Credit Agreement") with a group of lenders for a $ 3.0 billion credit facility (the "2017 Credit Facilities"), comprised of a $2.0 billion senior unsecured multicurrency revolving credit facility (the "2017 Revolving Facility") and an approximately $ 1.0 billion senior unsecured multicurrency term loan facility (the "2017 Term Loan Facility"). The credit agreement was subsequently amended to provide an additional senior unsecured term loan in Japanese Yen for approximately $424.7 million at the exchange rate effective on the transaction date.

On May 17, 2021, we repaid our outstanding term loans in Swedish Krona and Japanese Yen under the 2017 Term Loan Facility for $ 285.4 million and $374.5 million in U.S. Dollars, respectively, at the exchange rates in effect on May 17, 2021 using a portion of the cash proceeds from the 2026 Notes, 2028 Notes, 2031 Notes, and 2052 Notes issuances as described below.

On January 7, 2022, we entered into a credit agreement (the "2022 Credit Agreement") with a group of lenders for a senior unsecured credit facility, comprised of a $4.0 billion senior unsecured multicurrency revolving credit facility (the "2022 Revolving Facility") and a £ 500.0 million senior unsecured term loan facility (the "2022 Term Loan Facility" and, together with the 2022 Revolving Facility, collectively, the "2022 Credit Facilities"). The total debt issuance costs for the 2022 Revolving Facility and 2022 Term Loan Facility are $6.5 million and $0.8 million, respectively. We borrowed the full £ 500.0 million available under the 2022 Term Loan Facility, or approximately $676.9 million at the exchange rates in effect on that date. On that same day, using a portion of the proceeds from the 2022 Term Loan Facility, we prepaid in full all of the $ 549.6 million of indebtedness outstanding under the 2017 Term Loan Facility, at the exchange rates in effect on January 7, 2022 and terminated the 2017 Credit Agreement. In connection with the repayment and termination, we incurred an insignificant amount of loss on debt extinguishment. The remaining unamortized debt issuance costs of the 2017 Credit Facilities will continue to be amortized over the contract terms of the 2022 Credit Facilities.

The 2022 Credit Facilities have a maturity date of January 7, 2027. We may borrow, repay and reborrow amounts under the 2022 Revolving Facility until the Maturity Date, at which time all amounts outstanding under the 2022 Revolving Facility must be repaid in full. The term loan made under the 2022 Term Loan Facility has no scheduled principal amortization and must be repaid in full on the maturity date. The 2022 Revolving Credit Facility provides for extensions of credit in U.S. Dollars as well as certain other foreign currencies. Borrowings under the 2022 Revolving Facility bear interest at a rate based on the daily Secured Overnight Financing Rate ("SOFR"), term SOFR, an alternative currency daily rate, or an alternative currency term rate plus a spread adjustment, plus a margin that can vary from 0.555% to 1.200%. Borrowings under the 2022 Term Loan Facility bear interest at a rate based on the daily Sterling Overnight Index Average ("SONIA"), plus a spread adjustment, plus a margin that can vary from 0.625% to 1.450%. We are also required to pay a quarterly letter of credit fee on the face amount of each letter of credit, which fee is based on the same margin that applies from time to time to SOFR-indexed borrowings under the revolving credit line. The margin is dependent on either our consolidated net leverage ratio or our credit ratings. We are also required to pay a quarterly facility fee ranging from 0.07% to 0.25% per annum. The 2022 Credit Agreement contains customary covenants, including financial ratio covenants that are required to be maintained as of each quarter end.

As of December 31, 2022 and 2021, the total amounts outstanding under the 2022 Term Loan Facility and 2017 Term Loan Facility, net of debt issuance costs, were $603.0 million and $ 549.3 million, respectively.

As of December 31, 2022, we had 60 irrevocable letters of credit totaling $ 84.7 million issued and outstanding under the 2022 Revolving Facility, with approximately $3.9 billion remaining available to borrow under the 2022 Revolving Facility.

Senior Notes

Our senior notes consisted of the following as of December 31 (in thousands):

			2022		2021	
Senior Notes	**Issuance Date**	**Maturity Date**	**Amount**	**Effective Rate**	**Amount**	**Effective Rate**
2.625% Senior Notes due 2024	November 2019	November 2024	$ 1,000,000	2.79 %	$ 1,000,000	2.79 %
1.250% Senior Notes due 2025	June 2020	July 2025	500,000	1.46 %	500,000	1.46 %
1.000% Senior Notes due 2025	October 2020	September 2025	700,000	1.18 %	700,000	1.18 %
2.900% Senior Notes due 2026	November 2019	November 2026	600,000	3.04 %	600,000	3.04 %
1.450% Senior Notes due 2026	May 2021	May 2026	700,000	1.64 %	700,000	1.64 %
0.250% Euro Senior Notes due 2027	March 2021	March 2027	534,950	0.45 %	569,150	0.45 %
1.800% Senior Notes due 2027	June 2020	July 2027	500,000	1.96 %	500,000	1.96 %
1.550% Senior Notes due 2028	October 2020	March 2028	650,000	1.67 %	650,000	1.67 %
2.000% Senior Notes due 2028	May 2021	May 2028	400,000	2.21 %	400,000	2.21 %
3.200% Senior Notes due 2029	November 2019	November 2029	1,200,000	3.30 %	1,200,000	3.30 %
2.150% Senior Notes due 2030	June 2020	July 2030	1,100,000	2.27 %	1,100,000	2.27 %
2.500% Senior Notes due 2031	May 2021	May 2031	1,000,000	2.65 %	1,000,000	2.65 %
3.900% Senior Notes due 2032	April 2022	April 2032	1,200,000	4.07 %	—	— %
1.000% Euro Senior Notes due 2033	March 2021	March 2033	641,940	1.18 %	682,980	1.18 %
3.000% Senior Notes due 2050	June 2020	July 2050	500,000	3.09 %	500,000	3.09 %
2.950% Senior Notes due 2051	October 2020	September 2051	500,000	3.00 %	500,000	3.00 %
3.400% Senior Notes due 2052	May 2021	February 2052	500,000	3.50 %	500,000	3.50 %
			12,226,890		11,102,130	
Less amount representing unamortized debt discount and debt issuance cost			(117,351)		(117,986)	
			12,109,539		10,984,144	
Less current portion			—		—	
			$ 12,109,539		$ 10,984,144	

0.250% Euro Senior Notes due 2027 and 1.000% Euro Senior Notes due 2033

On March 10, 2021, we issued €500.0 million, or approximately $594.9 million in U.S. dollars, at the exchange rate in effect on March 10, 2021, aggregate principal amount of 0.250% senior notes due March 15, 2027 (the "2027 Euro Notes") and € 600.0 million, or approximately $713.8 million in U.S. dollars, at the exchange rate in effect on March 10, 2021, aggregate principal amount of 1.000% senior notes due March 15, 2033 (the "2033 Euro Notes").

Interest on the notes is payable annually in arrears on March 15 of each year, commencing on March 15, 2022. Total debt issuance costs and debt discounts related to the 2027 Euro Notes and the 2033 Euro Notes were $7.0 million and $14.1 million, respectively.

Redemption of 2.875% Euro Senior Notes due 2026

On March 24, 2021, using a portion of the net cash proceeds from the 2027 Euro Senior Notes and 2033 Euro Senior Notes, we redeemed the remaining outstanding 2.875% Euro Senior Notes due 2026 for $ 590.7 million in U.S. dollars, at the exchange rate in effect on March 24, 2021. In connection with the redemption, we incurred $13.2 million of loss on debt extinguishment, including $8.5 million in redemption premium that was paid in cash and $ 4.7 million related to the write-off of unamortized debt issuance costs, during the year ended December 31, 2021.

1.450% Senior Notes due 2026, 2.000% Senior Notes due 2028, 2.500% Senior Notes due 2031 and 3.400% Senior Notes due 2052

On May 17, 2021, we issued $ 700.0 million aggregate principal amount of 1.450% senior notes due 2026 (the "2026 Notes"), $ 400.0 million aggregate principal amount of 2.000% senior notes due 2028 (the "2028 Notes"), $ 1.0 billion aggregate principal amount of 2.500% senior notes due 2031 (the "2031 Notes"), and $500.0 million aggregate principal amount of 3.400% senior notes due 2052 (the "2052 Notes").

Interest on the 2026, 2028 and 2031 notes are payable semi-annually on May 15 and November 15 of each year, commencing on November 15, 2021. Interest on the 2052 notes are payable semi-annually on February 15 and August 15 of each year, commencing on February 15, 2022. Total debt issuance costs and debt discounts related to the 2026 Notes, 2028 Notes, 2031 Notes and 2052 Notes were $6.4 million, $5.3 million, $13.0 million and $9.3 million, respectively.

Redemption of 5.375% Senior Notes due 2027

On June 2, 2021, we redeemed all outstanding principal amount under the 5.375% Senior Notes due 2027 with a portion of the net cash proceeds from the issuance of the 2026 Notes, 2028 Notes, 2031 Notes, and 2052 Notes as described above. In connection with the redemption, we incurred $100.6 million of loss on debt extinguishment, including $90.7 million redemption premium that was paid in cash and $ 9.9 million related to the write-off of unamortized debt issuance costs.

3.900% Senior Notes due 2032

On April 5, 2022, we issued $ 1.2 billion aggregate principal amount of 3.900% Senior Notes due 2032 (the "2032 Notes"). Interest on the 2032 Notes is payable semi-annually on April 15 and October 15 of each year, commencing on October 15, 2022. Debt issuance costs and debt discounts related to the 2032 Notes were $16.3 million.

All of our senior notes are unsecured and rank equal in right of payment to our existing or future senior indebtedness and senior in right of payment to our existing and future subordinated indebtedness. Interest on the senior notes is paid semi-annually in arrears, with the exception of our Euro senior notes which is paid annually in arrears. The senior notes are effectively subordinated to all of the existing and future secured debt, including debt outstanding under any bank facility or secured by any mortgage, to the extent of the assets securing such debt. They are also structurally subordinated to any existing and future indebtedness and other liabilities (including trade payables) of any of our subsidiaries.

Each series of senior notes is governed by an indenture and a supplemental indenture between us and U.S. Bank National Association, as trustee. These supplemental indentures contain covenants that limit our ability and the ability of our subsidiaries to, among other things:

- incur liens;
- enter into sale-leaseback transactions; and
- merge or consolidate with any other person.

As of December 31, 2022, we are in compliance with all covenants. Subject to compliance with the limitations described above, we may issue an unlimited principal amount of additional notes at later dates under the same indenture as the senior notes.

We are not required to make any mandatory redemption with respect to the senior notes; however, upon the event of a change in control, we may be required to offer to purchase the senior notes.

Optional Redemption

With respect to the rest of the Notes listed below, we may redeem at our election, at any time or from time to time, some or all of the notes of any series before they mature. The redemption price will equal the sum of (1) an amount equal to one hundred percent (100%) of the principal amount of the notes being redeemed plus accrued and unpaid interest up to, but not including, the redemption date and (2) a make-whole premium. If the Notes are redeemed on or after the First Par Call Date listed in the table below, the redemption price will not include a make-whole premium for the applicable notes.

Senior Notes Description	First Par Call Date
2.625% Senior Notes due 2024	October 18, 2024
1.250% Senior Notes due 2025	June 15, 2025
1.000% Senior Notes due 2025	August 15, 2025
1.450% Senior Notes due 2026	April 15, 2026
2.900% Senior Notes due 2026	September 18, 2026
0.250% Euro Senior Notes due 2027	January 15, 2027
1.800% Senior Notes due 2027	May 15, 2027
1.550% Senior Notes due 2028	January 15, 2028
2.000% Senior Notes due 2028	March 15, 2028
3.200% Senior Notes due 2029	August 18, 2029
2.150% Senior Notes due 2030	April 15, 2030
2.500% Senior Notes due 2031	February 15, 2031
3.900% Senior Notes due 2032	January 15, 2032
1.000% Euro Senior Notes due 2033	December 15, 2032
3.000% Senior Notes due 2050	January 15, 2050
2.950% Senior Notes due 2051	March 15, 2051
3.400% Senior Notes due 2052	August 15, 2051

Maturities of Debt Instruments

The following table sets forth maturities of our debt, including mortgage and loans payable, and senior notes, gross of debt issuance costs, debt discounts and debt premiums, as of December 31, 2022 (in thousands):

Years ending:	
2023	$ 9,847
2024	1,009,469
2025	1,208,077
2026	1,307,656
2027	1,644,202
Thereafter	7,701,256
	$ 12,880,507

Fair Value of Debt Instruments

The following table sets forth the estimated fair values of our mortgage and loans payable and senior notes, including current maturities, as of December 31 (in thousands):

	2022	2021
Mortgage and loans payable	$ 666,387	$ 621,051
Senior notes	10,196,933	11,049,834

The fair values of the mortgage and loans payable, which are not publicly traded, were estimated by considering our credit rating, current rates available to us for debt of the same remaining maturities and terms of the debt (Level

2). The fair value of the senior notes, which are traded in the public debt market, was based on quoted market prices (Level 1).

Interest Charges

The following table sets forth total interest costs incurred, and total interest costs capitalized for the years ended December 31 (in thousands):

	2022	2021	2020
Interest expense	$ 356,337	$ 336,082	$ 406,466
Interest capitalized	18,152	24,505	26,750
Interest charges incurred	$ 374,489	$ 360,587	$ 433,216

Total interest paid in cash, net of capitalized interest, during the years ended December 31, 2022, 2021 and 2020 was $ 412.1 million, $401.9 million and $471.7 million, respectively.

12. Stockholders' Equity

Our authorized share capital is 300,000,000 shares of common stock and 100,000,000 shares of preferred stock, of which 25,000,000 is designated Series A, 25,000,000 is designated as Series A-1 and 50,000,000 is undesignated. As of December 31, 2022 and 2021, we had no preferred stock issued and outstanding.

Common Stock

In May 2020, we issued and sold 2,587,500 shares of common stock in a public offering pursuant to a registration statement and a related prospectus and prospectus supplement. We received net proceeds of approximately $1.7 billion, net of underwriting discounts, commissions and offering expenses.

In October 2020, we established an "at the market" equity offering program (the "2020 ATM Program"), under which we could, from time to time, offer and sell shares of our common stock to or through sales agents up to an aggregate of $1.5 billion. In February 2022, we entered into a forward sale amendment to the 2020 ATM Program, under which we could, from time to time, offer and sell shares under the equity distribution agreement pursuant to forward sale transactions (the "Equity Forward Amendment"). In November 2022, we established a successor ATM program, also with substantially the same terms as the Equity Forward Amendment noted above, under which we may, from time to time, offer and sell on a spot or forward basis up to an aggregate of $1.5 billion of our common stock to or through sales agents in "at the market" transactions (the "2022 ATM Program"). The forward sale agreements provide three settlement alternatives to us: physical settlement, cash settlement or net share settlement. In accordance with ASC 815, the forward sale agreements are classified as equity for balance sheet purposes. During the first half of the year, we executed five forward sale agreements under the 2020 ATM Program to sell 579,873 shares of our common stock. On August 3, 2022, we physically settled these forward sale shares for approximately $393.6 million, net of payment of commissions to sales agents and other offering expenses, at an aggregate weighted-average forward sale price of $678.72 per share. In the fourth quarter of 2022, we executed three additional forward sale agreements to sell 458,459 shares of our common stock with maturity dates ranging from February 2023 to November 2023. Of this amount, 308,875 shares were executed under the 2020 ATM Program and the remaining 149,584 shares were executed under the 2022 ATM Program. The future net settlement value for these forward sale agreements is approximately $301.6 million at an aggregate weighted-average forward sale price of $657.75 per share.

For the year ended December 31, 2022, we sold an additional 580,833 shares, excluding the forward sale transactions noted above, for approximately $403.6 million, net of payment of commissions to sales agents and other offering expenses, under the 2020 ATM Program. As of December 31, 2022, after giving effect to the unsettled forward sale transactions noted above, no shares remained available for sale under the 2020 ATM Program. For the year ended December 31, 2021, we sold 637,617 shares for approximately $497.9 million, net of payment of commissions to sales agents and other offering expenses, under the 2020 ATM Program. For the year ended December 31, 2020, we sold 415,512 shares for approximately $298.3 million, net of payment of commissions to sales agents and other offering expenses under the 2018 ATM Program.

As of December 31, 2022, we had $ 1.4 billion of common stock available for sale under the 2022 ATM Program, which amount gives effect to the unsettled forward sale transaction noted above. For the year ended December 31, 2022, no shares were issued under the 2022 ATM Program.

As of December 31, 2022, we had reserved the following authorized but unissued shares of common stock for future issuances:

Common stock options and restricted stock units	4,658,781
Common stock employee purchase plans	2,497,134
Total	7,155,915

Accumulated Other Comprehensive Loss

The changes in accumulated other comprehensive loss, net of tax, by components are as follows (in thousands):

	December 31, 2019	Net Change	December 31, 2020	Net Change	December 31, 2021	Net Change	December 31, 2022
Foreign currency translation adjustment ("CTA") gain (loss)	$ (1,056,918)	$ 548,503	$ (508,415)	$ (559,984)	$ (1,068,399)	$ (769,838)	$ (1,838,237)
Unrealized gain (loss) on cash flow hedges (1)	15,638	(82,790)	(67,152)	60,562	(6,590)	40,543	33,953
Net investment hedge CTA gain (loss) (1)	107,619	(444,553)	(336,934)	326,982	(9,952)	425,701	415,749
Net actuarial gain (loss) on defined benefit plans (2)	(952)	85	(867)	57	(810)	(101)	(911)
	$ (934,613)	$ 21,245	$ (913,368)	$ (172,383)	$ (1,085,751)	$ (303,695)	$ (1,389,446)

(1) Refer to Note 8 for a discussion of the amounts reclassified from accumulated other comprehensive loss to net income.

(2) We have a defined benefit pension plan covering all employees in two countries where such plans are mandated by law. We do not have any defined benefit plans in any other countries. The unamortized gain (loss) on defined benefit plans includes gains or losses resulting from a change in the value of either the projected benefit obligation or the plan assets resulting from a change in an actuarial assumption, net of amortization.

Changes in foreign currencies can have a significant impact to our consolidated balance sheets (as evidenced above in our foreign currency translation loss), as well as its consolidated results of operations, as amounts in foreign currencies are generally translated into more U.S. dollars when the U.S. dollar weakens or less U.S. dollars when the U.S. dollar strengthens. As of December 31, 2022, the U.S. dollar was generally stronger relative to certain of the currencies of the foreign countries in which we operate as compared to December 31, 2021. Because of this, the U.S. dollar had an overall unfavorable impact on our consolidated financial position because the foreign denominations translated into fewer U.S. dollars as evidenced by an increase in foreign currency translation loss for the year ended December 31, 2022 as reflected in the above table. The volatility of the U.S. dollar as compared to the other currencies in which we operate could have a significant impact on our consolidated financial position and results of operations including the amount of revenue that we report in future periods.

Dividends

During the years ended December 31, 2022, 2021 and 2020, our Board of Directors declared quarterly dividends whose treatment for federal income tax purposes were as follows:

Declaration Date	Record Date	Payment Date	Total Distribution (1)	Nonqualified Ordinary Dividend (2)	Total Distribution Amount
			(per share)		(in thousands)
Fiscal 2022					
2/16/2022	3/7/2022	3/23/2022	$ 3.100000	$ 3.100000	$ 282,031
4/27/2022	5/18/2022	6/15/2022	3.100000	3.100000	282,168
7/27/2022	8/17/2022	9/21/2022	3.100000	3.100000	286,136
11/2/2022	11/16/2022	12/14/2022	3.100000	3.100000	286,868
Total			$ 12.400000	$ 12.400000	$ 1,137,203
Fiscal 2021					
2/10/2021	2/24/2021	3/17/2021	$ 2.870000	$ 2.870000	$ 256,321
4/28/2021	5/19/2021	6/16/2021	2.870000	2.870000	257,199
7/28/2021	8/18/2021	9/22/2021	2.870000	2.870000	257,769
11/3/2021	11/17/2021	12/15/2021	2.870000	2.870000	258,716
Total			$ 11.480000	$ 11.480000	$ 1,030,005
Fiscal 2020					
2/12/2020	2/26/2020	3/18/2020	$ 2.660000	$ 2.660000	$ 227,386
5/6/2020	5/20/2020	6/17/2020	2.660000	2.660000	235,449
7/29/2020	8/19/2020	9/23/2020	2.660000	2.660000	236,424
10/28/2020	11/18/2020	12/9/2020	2.660000	2.660000	237,010
Total			$ 10.640000	$ 10.640000	$ 936,269

(1) Common stock dividends are characterized for federal income tax purposes as nonqualified ordinary dividend, qualified ordinary dividend, capital gains or return of capital. During the years ended December 31, 2022, 2021 and 2020, we did not classify any portion of the distributions as qualified ordinary dividend, capital gains or return of capital.

(2) All nonqualified ordinary dividends are eligible for the 20% deduction generally allowable to non-corporate shareholders under Internal Revenue Code Section 199A.

In addition, as of December 31, 2022, for dividends and special distributions attributed to the RSUs, we recorded a short-term dividend payable of $ 12.3 million and a long-term dividend payable of $10.4 million for the RSUs that have not yet vested. As of December 31, 2021, for dividends and special distributions attributed to the RSUs, we recorded a short-term dividend payable of $12.0 million and a long-term dividend payable of $9.7 million for the RSUs that have not yet vested.

13. Stock-Based Compensation

Equity Compensation Plans

As of December 31, 2022, our equity compensation plans included:

- *2004 Employee Stock Purchase Plan (the "2004 Purchase Plan")*: The 2004 Purchase Plan permits eligible employees to purchase common stock on favorable terms via payroll deductions of up to 15% of the employee's cash compensation, subject to certain share and statutory dollar limits. Two overlapping offering periods commence during each calendar year, on each February 15 and August 15 or such other periods or dates as determined by the Compensation Committee from time to time, and the offering periods last up to 24 months with a purchase date every 6 months. The price of each share purchased is 85% of the lower of

a) the fair value per share of common stock on the last trading day before the commencement of the applicable offering period or b) the fair value per share of common stock on the purchase date.

- 2020 Equity Incentive Plan: In 2020, both our Board of Directors and our stockholders approved the 2020 Equity Plan, which provides for the grant of stock options, including incentive stock options and non-qualified stock options, stock appreciation rights, RSAs, RSUs, other stock-based incentive awards, dividend equivalents, and cash-based incentive awards. The 2020 Equity Plan's awards may be granted to employees, non-employee members of the Board and consultants. Equity awards granted under the 2020 Equity Incentive Plan generally vest over four years. The maximum numbers of shares of our common stock available for issuance under the 2020 Equity Plan is equal to the sum of 4.0 million shares and the shares transferred from the 2000 Equity Incentive Plan.

The Equity compensation plans are administered by the Talent, Culture and Compensation Committee of the Board of Directors (the "Compensation Committee"), and the Compensation Committee may terminate or amend these plans, with approval of the stockholders as may be required by applicable law, at any time. As of December 31, 2022, shares reserved and available for issuance under the equity compensation plans are as follows:

	Shares reserved	Shares available for grant
2004 Purchase Plan	5,392,206	2,497,134
2020 Equity Incentive Plan	4,403,832	3,213,089

Restricted Stock Units

Since 2008, we primarily grant RSUs to our employees, including executives and non-employee directors, in lieu of stock options. We generally grant RSUs that have a service condition only or have both a service and performance condition. Each RSU is not considered issued and outstanding and does not have voting rights until it is converted into one share of our common stock upon vesting. RSUs activity is summarized as follows:

	Number of Shares Outstanding	Weighted Average Grant Date Fair Value per Share	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value [(1)] (Dollars in Thousands)
RSUs outstanding, December 31, 2019	1,312,725	$ 411.99		
RSUs granted	695,383	596.80		
RSUs released, vested	(606,250)	426.03		
Special distribution shares released	(722)	264.57		
RSUs canceled	(63,502)	457.91		
RSUs outstanding, December 31, 2020	1,337,634	499.60		
RSUs granted	776,628	679.59		
RSUs released, vested	(633,466)	505.40		
Special distribution shares released	(34)	297.03		
RSUs canceled	(123,168)	561.34		
RSUs outstanding, December 31, 2021	1,357,594	594.27		
RSUs granted	912,249	661.43		
RSUs released, vested	(668,733)	576.62		
RSUs canceled	(155,418)	624.98		
RSUs outstanding, December 31, 2022	1,445,692	$ 641.51	1.26	$ 946,971

(1) The intrinsic value is calculated based on the market value of the stock as of December 31, 2022.

The total fair value of RSUs vested and released during the years ended December 31, 2022, 2021 and 2020 was $ 462.0 million, $472.9 million and $417.0 million, respectively.

Employee Stock Purchase Plan

We provide the following disclosures for the 2004 Purchase Plan as of December 31 (dollars, except shares):

	2022	2021	2020
Weighted-average purchase price per share	$ 568.29	$ 467.59	$ 371.71
Weighted average grant-date fair value per share of shares purchased	$ 202.61	$ 138.80	$ 114.08
Number of shares purchased	143,515	166,023	167,113

We use the Black-Scholes option-pricing model to determine the fair value of shares under the 2004 Purchase Plan with the following assumptions during the years ended December 31:

	2022	2021	2020
Range of dividend yield	1.48% - 1.55%	1.58 - 1.77%	1.94 - 2.08%
Range of risk-free interest rate	0.72% - 3.06%	0.01 - 0.21%	0.10 - 1.55%
Range of expected volatility	25.73% - 37.20%	25.54 - 41.24%	19.28 - 51.93%
Weighted-average expected volatility	30.34 %	34.08 %	32.94 %
Weighted average expected life (in years)	1.06	1.18	1.36

Stock-Based Compensation

The following table presents, by operating expense, our stock-based compensation expense recognized in our consolidated statement of operations for the years ended December 31 (in thousands):

	2022	2021	2020
Cost of revenues	$ 45,028	$ 38,438	$ 32,893
Sales and marketing	82,794	79,144	72,895
General and administrative	276,161	246,192	205,232
Total	$ 403,983	$ 363,774	$ 311,020

Our stock-based compensation recognized in the consolidated statement of operations was comprised of the following types of equity awards for the years ended December 31 (in thousands):

	2022	2021	2020
RSUs	$ 359,952	$ 330,077	$ 289,426
RSAs[1]	9,793	10,067	8,289
Employee stock purchase plan	34,238	23,630	13,305
Total	$ 403,983	$ 363,774	$ 311,020

(1) During the year ended December 31, 2020, we awarded48,799 shares of RSAs. See Note1 for further discussion.

During the years ended December 31, 2022, 2021 and 2020, we capitalized $ 46.3 million, $27.7 million and $20.3 million, respectively, of stock-based compensation expense as construction in progress in property, plant and equipment.

As of December 31, 2022, the total stock-based compensation cost related to unvested equity awards not yet recognized, net of estimated forfeitures, totaled $694.7 million which is expected to be recognized over a weighted-average period of 2.18 years.

14. Income Taxes

Income before income taxes is attributable to the following geographic locations for the years ended December 31, (in thousands):

	2022	2021	2020
Domestic	$ 334,486	$ 137,492	$ 18,395
Foreign	494,883	471,460	497,830
Income before income taxes	$ 829,369	$ 608,952	$ 516,225

The tax benefit (expenses) for income taxes consisted of the following components for the years ended December 31, (in thousands):

	2022	2021	2020
Current:			
Federal	$ 1,679	$ 7,753	$ 4,552
State and local	(892)	(156)	1,597
Foreign	(83,210)	(76,450)	(171,092)
Subtotal	(82,423)	(68,853)	(164,943)
Deferred:			
Federal	(16,284)	11,060	16,553
State and local	(5,024)	(1,411)	704
Foreign	(21,061)	(50,020)	1,535
Subtotal	(42,369)	(40,371)	18,792
Income tax expense	$ (124,792)	$ (109,224)	$ (146,151)

State and foreign taxes not based on income are included in general and administrative expenses and the aggregate amounts were not significant for the years ended December 31, 2022, 2021 and 2020.

The fiscal 2022, 2021, and 2020 income tax benefit (expenses) differed from the amounts computed by applying the U.S. federal income tax rate of 21% to pre-tax income as a result of the following for the years ended December 31 (in thousands):

	2022	2021	2020
Federal tax at statutory rate	$ (174,168)	$ (127,880)	$ (109,906)
State and local tax (expense) benefit	(5,916)	(1,513)	2,071
Deferred tax assets generated in current year not benefited	(39,196)	(19,703)	(12,852)
Foreign income tax rate differential	(12,379)	(18,918)	(16,364)
Non-deductible expenses	(5,995)	(10,579)	(4,427)
Stock-based compensation expense	(8,321)	(1,385)	(954)
Change in valuation allowance	(19,793)	(595)	390
Foreign financing activities	(5,519)	(4,805)	(11,743)
Uncertain tax positions reserve	45,317	50,059	(38,014)
Tax adjustments related to REIT	107,312	39,164	50,107
Change in deferred tax adjustments	(239)	(1,251)	(136)
Effect of tax rate change on deferred tax assets	(3,126)	(12,297)	—
Other, net	(2,769)	479	(4,323)
Total income tax expense	$ (124,792)	$ (109,224)	$ (146,151)

Of the unrecognized tax benefits being realized in the years ended December 31, 2022 and 2021, approximately $ 2.0 million and $32.0 million, respectively, are related to the uncertain tax position inherited from the acquisition of Metronode in 2018. The uncertain tax position was covered by an indemnification agreement with the Seller. As such, the realization of the unrecognized tax benefit resulted in an impairment of the indemnification asset for the same amount, which has been included in Other Income (Expense) on the Consolidated Statements of Operations for the years ended December 31, 2022 and 2021.

Our accounting policy is to treat any tax on Global Intangible Low-Taxed Income ("GILTI") inclusions as a current period cost included in the tax expense in the year incurred. We believe the GILTI inclusion provision will result in no material financial statement impact provided we satisfy our REIT distribution requirement with respect to the GILTI inclusions.

As a result of our conversion to a REIT effective January 1, 2015, it is no longer our intent to indefinitely reinvest undistributed foreign earnings. However, no deferred tax liability has been recognized to account for this change because the expected recovery of the basis difference will not result in material U.S. taxes in the post-REIT conversion periods due to the fact that the majority of our foreign subsidiaries are either QRSs or owned directly by our REIT and QRSs, and the foreign withholding tax effect would be immaterial. We continue to assess the foreign withholding tax impact of our current policy and do not believe the distribution of our foreign earnings would trigger any significant foreign withholding taxes, as the majority of the foreign jurisdictions where we operate do not impose withholding taxes on dividend distributions to a corporate U.S. parent.

The types of temporary differences that give rise to significant portions of our deferred tax assets and liabilities are set out below as of December 31 (in thousands):

	2022	2021 [1]
Deferred tax assets:		
Stock-based compensation expense	$ 9,002	$ 9,057
Net unrealized losses	3,988	—
Operating lease liabilities	253,005	225,261
Capital lease liabilities	—	13,927
Deferred revenue	13,887	14,429
Goodwill	20,511	30,842
Loss carryforwards and tax credits	142,270	201,132
Others, net	32,543	7,257
Gross deferred tax assets	475,206	501,905
Valuation allowance	(166,594)	(100,746)
Total deferred tax assets, net	308,612	401,159
Deferred tax liabilities:		
Net unrealized gains	—	(1,462)
Capital lease liabilities	(8,033)	—
Property, plant and equipment	(221,343)	(262,532)
Right-of-use assets	(256,837)	(233,199)
Deferred income	(28,314)	(33,052)
Intangible assets	(132,816)	(151,385)
Total deferred tax liabilities	(647,343)	(681,630)
Net deferred tax liabilities	$ (338,731)	$ (280,471)

[1] The prior year amounts presented in the table above have been reclassified to conform with the current year presentation.

The tax basis of REIT assets, excluding investments in TRSs, is greater than the amounts reported for such assets in the accompanying consolidated balance sheet by approximately $2.5 billion as of December 31, 2022.

Our accounting for deferred taxes involves weighing positive and negative evidence concerning the realizability of our deferred tax assets in each taxing jurisdiction. After considering evidence such as the nature, frequency and severity of current and cumulative financial reporting losses, the sources of future taxable income, taxable income in carryback years permitted by the tax laws and tax planning strategies, we concluded that valuation allowances were required in certain jurisdictions. The operations in most of the jurisdictions for which a valuation allowance has been established have a history of significant losses as of December 31, 2022. As such, we do not believe these operations have established a sustained history of profitability and that a valuation allowance is, therefore, necessary. We also provided a valuation allowance against certain gross deferred tax assets in certain taxing jurisdictions as these deferred tax assets are not expected to be realizable in the foreseeable future.

Changes in the valuation allowance for deferred tax assets for the years ended December 31, 2022, 2021 and 2020 are as follows (in thousands):

	2022	2021	2020
Beginning balance	$ 100,746	$ 82,344	$ 57,812
Amounts from acquisitions	13,458	964	5,777
Amounts recognized into income	22,905	595	(390)
Current increase	36,513	19,539	15,044
Impact of foreign currency exchange	(7,028)	(2,696)	4,101
Ending balance	$ 166,594	$ 100,746	$ 82,344

Our NOL carryforwards for federal, state and foreign tax purposes which expire, if not utilized, at various intervals from 2023, are outlined below (in thousands):

Expiration Date	Federal (1)	State (1)	Foreign (2) (3)	Total
2023	$ 17,395	$ —	$ 2,083	$ 19,478
2024 to 2026	15,564	—	33,722	49,286
2027 to 2029	6,065	—	28,046	34,111
2030 to 2032	—	767	5,457	6,224
2033 to 2035	1,838	1,339	11,692	14,869
2036 to 2038	5,294	3,636	20,143	29,073
Thereafter	147,010	74,416	452,303	673,729
	$ 193,166	$ 80,158	$ 553,446	$ 826,770

(1) The total amount of NOL carryforwards that will not be available to offset our future taxable income after the dividends paid deduction due to Section 382 limitations was $36.7 million for federal and $22.7 million for state.

(2) In certain jurisdictions, the net operating loss carryforwards can only be used to offset a percentage of taxable income in a given year.

(3) If certain substantial changes in the entity's ownership occur or have determined to have occurred, there may be a limitation on the amount of the carryforwards that can be utilized.

As of December 31, 2022, we had tax credit carryforwards of $ 6.2 million, which expire, if not utilized, from 2023 to 2031. We also had capital losses of $7.2 million, which can be carried forward indefinitely.

The beginning and ending balances of our unrecognized tax benefits are reconciled below for the years ended December 31 (in thousands):

	2022	2021	2020
Beginning balance	$ 148,300	$ 207,759	$ 173,726
Gross increases related to prior year tax positions	1,401	4,547	14,732
Gross decreases related to prior year tax positions	(43,575)	(58,356)	—
Gross increases related to current year tax positions	7,004	10,000	29,149
Decreases resulting from expiration of statute of limitation	(11,969)	(10,561)	(6,518)
Decreases resulting from settlements	(11,924)	(5,089)	(3,330)
Ending balance	$ 89,237	$ 148,300	$ 207,759

We recognize interest and penalties related to unrecognized tax benefits within income tax expense in the consolidated statements of operations. We accrued $6.5 million, $13.6 million, and $21.3 million for interest and penalties as of December 31, 2022, 2021 and 2020, respectively.

The unrecognized tax benefits of $89.2 million as of December 31, 2022, if subsequently recognized, will affect our effective tax rate favorably at the time when such a benefit is recognized.

Due to various tax years open for examination and the ongoing tax audits and inquiries by the tax authorities in different jurisdictions, it is reasonably possible that the balance of unrecognized tax benefits could significantly increase or decrease over the next 12 months as we may be subject to either examination by tax authorities, tax audit settlements, or a lapse in statute of limitations. We are currently unable to estimate the range of possible adjustments to the balance of unrecognized tax benefits.

In general, our income tax returns for the years from 2019 through the current year remain open to examination by federal and state taxing authorities. In addition, our tax years of 2005 through current year remain open and subject to examination by local tax authorities in certain foreign jurisdictions in which we have major operations.

15. Commitments and Contingencies

Purchase Commitments

As a result of our various IBX data center expansion projects, as of December 31, 2022, we were contractually committed for approximately $ 1.6 billion of unaccrued capital expenditures, primarily for IBX infrastructure equipment not yet delivered and labor not yet provided, in connection with the work necessary to open these IBX data centers and make them available to our customers for installation. We also had numerous other, non-capital purchase commitments in place as of December 31, 2022, such as commitments to purchase power in select locations through 2023 and thereafter, and other open purchase orders for goods, or services to be delivered or provided during 2023 and thereafter. Such other miscellaneous purchase commitments totaled approximately $1.8 billion as of December 31, 2022. For further information on our equity method investments contribution commitments and lease commitments, see Notes 6 and Note 10, respectively, above.

Contingent Liabilities

We estimate our exposure on certain liabilities, such as indirect and property taxes, based on the best information available at the time of determination. With respect to real and personal property taxes, we record what we can reasonably estimate based on prior payment history, assessed value by the assessor's office, current landlord estimates or estimates based on current or changing fixed asset values in each specific municipality, as applicable. However, there are circumstances beyond our control whereby the underlying value of the property or basis for which the tax is calculated on the property may change, such as a landlord selling the underlying property of one of our IBX data center leases or a municipality changing the assessment value in a jurisdiction and, as a result, our property tax obligations may vary from period to period. Based upon the most current facts and circumstances, we make the necessary property tax accruals for each of our reporting periods. However, revisions in our estimates of the potential or actual liability could materially impact our financial position, results of operations or cash flows.

Our indirect and property tax filings in various jurisdictions are subject to examination by local tax authorities. Although we believe that we have adequately assessed and accounted for our potential tax liabilities, and that our tax estimates are reasonable, there can be no certainty that additional taxes will not be due upon audit of our tax returns or as a result of further changes to the tax laws and interpretations thereof. For example, we are currently undergoing an audit and appealing the tentative assessment in Brazil. The final settlement of the audit and the outcomes of the appeal are uncertain and may not be resolved in our favor. We regularly assess the likelihood of adverse outcomes resulting from these examinations and appeals that would affect the adequacy of our tax accruals for each of the reporting periods. If any issues arising from the tax examinations and appeals are resolved in a manner inconsistent with our expectations, the revision of the estimates of the potential or actual liabilities could materially impact our financial position, results of operations, or cash flows.

From time to time, we may have certain contingent liabilities that arise in the ordinary course of our business activities. Contingent liabilities are accrued when it is probable that future expenditures will be made and such expenditures can be reasonably estimated. In the opinion of management, there are no pending claims for which the outcome is expected to result in a material adverse effect in the financial position, results of operations or cash flows.

Employment Agreements

We have entered into a severance agreement with certain of our executive officers that provides for a severance payment equal to 100% of the executive officer's annual base salary and maximum bonus in the event his or her employment is terminated for any reason other than cause or he or she voluntarily resigns under certain circumstances as described in the agreement, or 200% of the executive officer's annual base salary and maximum bonus in the event this occurs after a change-in-control of our company. For certain other executive officers, these benefits are only triggered after a change-in-control of our company, in which case the officer is entitled to 200% of the executive officer's annual base salary and maximum bonus. In addition, under these agreements, the executive officer is entitled to the payment of his or her monthly health care premiums under the Consolidated Omnibus Budget Reconciliation Act for up to 24 months.

Indemnification and Guarantor Arrangements

As permitted under Delaware law, we have agreements whereby we indemnify our officers and directors for certain events or occurrences while the officer or director is, or was serving, at our request in such capacity. The term of the indemnification period is for the officer's or director's lifetime. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited; however, we have a director and officer insurance policy that could limit our exposure and enable us to recover a portion of any future amounts paid. As a result of our insurance policy that could limit our exposure and enable us to recover some or all of amounts paid, our estimated fair value of these indemnification agreements is minimal. We have no liabilities recorded for these agreements as of December 31, 2022.

We enter into standard indemnification agreements in the ordinary course of business. Pursuant to these agreements, we may agree to indemnify, hold harmless, and reimburse the indemnified party for losses suffered or incurred by the indemnified party, generally a business partner or a customer, in connection matters such as any U.S. patent, or any copyright or other intellectual property infringement claim by any third party with respect to our offerings; a breach of confidentiality obligations and certain other contractual warranties; our gross negligence, willful misconduct, fraud, misrepresentation, or violation of law; and/or if we cause tangible property damage, personal injury or death. The term of any such indemnification agreement is generally perpetual after execution of the agreement. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited; however, we have never incurred material costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, our estimated fair value of these agreements is minimal. We do not have significant liabilities recorded for these agreements as of December 31, 2022.

We enter into arrangements with certain business partners, whereby the business partner agrees to provide services as a subcontractor for our installations. Accordingly, we enter into standard indemnification agreements with our customers, whereby we indemnify them for certain acts, such as personal property damage, by our subcontractors. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited; however, we have general and umbrella insurance policies that could enable us to recover a portion of any amounts paid. We have never incurred material costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, our estimated fair value of these agreements is minimal. We do not have significant liabilities recorded for these agreements as of December 31, 2022.

We have service level commitment obligations to certain of our customers. As a result, service interruptions or significant equipment damage in our IBX data centers, whether or not within our control, could result in obligations to these customers. Our liability insurance may not be adequate to cover those expenses. In addition, any loss of service, equipment damage or inability to meet our service level commitment obligations could reduce the confidence our customers have in us, and could consequently impair our ability to obtain and retain customers, which would adversely affect both our ability to generate revenues and our operating results. We generally have the ability to determine such service level credits prior to the associated revenue being recognized. We do not have significant liabilities in connection with service level credits as of December 31, 2022.

Concurrent with the closing of the EMEA 2 Joint Venture, the EMEA 2 Joint Venture entered into credit facility agreements with a group of lenders under which it could borrow up to approximately $1.4 billion in total at the exchange rate in effect on December 31, 2022, with such facilities maturing in 2025 and 2026. In connection with our 20% equity investment in the EMEA 2 Joint Venture, we provided the lenders with guarantees covering 20% of all payments of principal and interest due and payable by the EMEA 2 Joint Venture under these credit facilities, up to a limit of $ 292.1 million in total at the exchange rate in effect on December 31, 2022. As of December 31, 2022, the maximum potential amount of our future payments under these guarantees was approximately $89.3 million, at the exchange rates in effect on that date. Our estimated fair value of these guarantees is minimal as the likelihood of making a payout under the guarantees is low.

16. Related Party Transactions

Joint Venture Related Party Transactions

We have lease arrangements and provide various services to the EMEA 1 Joint Venture and the VIE Joint Ventures (the "Joint Ventures") through multiple agreements, including sales and marketing, development management, facilities management, and asset management services. These transactions are generally considered to have been negotiated at arm's length. The following table presents the revenues and expenses from these arrangements with the Joint Ventures in our consolidated statements of operations (in thousands):

		Years Ended December 31,		
Related Party	**Nature of Transaction**	**2022**	**2021**	**2020**
EMEA 1 Joint Venture	Revenues	$ 39,065	$ 42,387	$ 21,306
EMEA 1 Joint Venture	Expenses (1)	7,686	8,303	14,935
VIE Joint Ventures	Revenues	40,284	28,320	588

(1) Balances primarily consist of rent expenses for a15 year sub-lease agreement with the EMEA 1 Joint Venture for a London data center.

The following table presents the assets and liabilities from related party transactions with the Joint Ventures in our consolidated balance sheets (in thousands):

		As of December 31,	
Related Party	**Balance Sheet Line Item**	**2022**	**2021**
EMEA 1 Joint Venture	Receivables	$ 73,929	$ 32,077
	Contract Assets [1]	7,261	54,503
	Finance Lease Right of Use Assets	100,968	118,817
	Other Liabilities and Payables	1,193	2,483
	Other Liabilities and Payables - Construction Obligation [2]	18,967	39,382
	Deferred Revenue	15,470	16,886
	Finance Lease Right of Use Liabilities	108,603	124,918
VIE Joint Ventures	Receivables	19,935	29,077
	Contract Assets	5,281	1,492
	Payables	—	1,876

(1) A portion of the contract asset balance relates to commitments to complete a residual portion of the Paris 9 data center sold to the EMEA 1 Joint Venture, which is reimbursable in full upon completion.

(2) The balance primarily relates to the obligation to pay for future construction for certain sites sold as a part of the EMEA 1 Joint Venture transaction.

We have also sold certain data center facilities to our Joint Ventures and recognized gains or losses on asset sales; for more information refer to Note 5 above.

Other Related Party Transactions

We have several significant stockholders and other related parties that are also customers and/or vendors. Our activity of other related party transactions was as follows (in thousands):

	Years ended December 31,		
	2022	**2021**	**2020**
Revenues	$ 236,464	$ 140,947	$ 95,264
Costs and services	58,932	5,337	10,849

	As of December 31,	
	2022	**2021**
Accounts receivable	$ 25,990	$ 27,997
Accounts payable	665	20

17. Segment Information

While we have one primary line of business, which is the design, build-out and operation of IBX data centers, we have determined that we have three reportable segments comprised of our Americas, EMEA and Asia-Pacific geographic regions. Our chief operating decision-maker evaluates performance, makes operating decisions and allocates resources based on our revenues and adjusted EBITDA performance both on a consolidated basis and based on these three reportable segments. Intercompany transactions between segments are excluded for management reporting purposes.

EQUINIX, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS - (Continued)

The following tables present revenue information disaggregated by product lines and geographic areas (in thousands):

	Year Ended December 31, 2022			
	Americas	EMEA	Asia-Pacific	Total
Colocation (1)	$ 2,187,751	$ 1,744,121	$ 1,150,738	$ 5,082,610
Interconnection	756,214	268,398	243,664	1,268,276
Managed infrastructure	218,499	119,361	77,646	415,506
Other (1)	20,727	75,449	8,719	104,895
Recurring revenues	3,183,191	2,207,329	1,480,767	6,871,287
Non-recurring revenues	166,026	135,875	89,917	391,818
Total	$ 3,349,217	$ 2,343,204	$ 1,570,684	$ 7,263,105

(1) Includes some leasing and hedging activities.

	Year Ended December 31, 2021			
	Americas	EMEA	Asia-Pacific	Total
Colocation (1)	$ 2,002,253	$ 1,597,830	$ 1,042,131	$ 4,642,214
Interconnection	678,677	259,538	223,287	1,161,502
Managed infrastructure	168,577	124,937	87,343	380,857
Other (1)	12,430	19,626	3,856	35,912
Recurring revenues	2,861,937	2,001,931	1,356,617	6,220,485
Non-recurring revenues	159,814	153,285	101,953	415,052
Total	$ 3,021,751	$ 2,155,216	$ 1,458,570	$ 6,635,537

(1) Includes some leasing and hedging activities.

	Year Ended December 31, 2020			
	Americas	EMEA	Asia-Pacific	Total
Colocation (1)	$ 1,820,709	$ 1,504,770	$ 933,522	$ 4,259,001
Interconnection	622,327	213,490	187,441	1,023,258
Managed infrastructure	120,159	127,722	89,464	337,345
Other (1)	19,605	18,738	83	38,426
Recurring revenues	2,582,800	1,864,720	1,210,510	5,658,030
Non-recurring revenues	124,958	131,669	83,888	340,515
Total	$ 2,707,758	$ 1,996,389	$ 1,294,398	$ 5,998,545

(1) Includes some leasing and hedging activities.

Total revenues attributed to the U.S. were $ 2.9 billion, $2.6 billion and $2.5 billion for the year ended December 31, 2022, 2021, and 2020, respectively. There is no country outside of the U.S. from which we derived revenues that exceeded 10% of our total revenues during any of these periods. No single customer accounted for 10% or greater of our accounts receivable or revenues for the years ended December 31, 2022, 2021, and 2020.

We define adjusted EBITDA as net income excluding income tax expense, interest income, interest expense, other income or expense, gain or loss on debt extinguishment, depreciation, amortization, accretion, stock-based compensation expense, restructuring charges, impairment charges, transaction costs and gain or loss on asset sales as presented below for the years ended December 31 (in thousands):

	2022	2021	2020
Adjusted EBITDA:			
Americas	$ 1,521,775	$ 1,326,460	$ 1,186,022
EMEA	1,109,502	1,033,333	974,246
Asia-Pacific	738,423	784,591	692,630
Total adjusted EBITDA	3,369,700	3,144,384	2,852,898
Depreciation, amortization and accretion expense	(1,739,374)	(1,660,524)	(1,427,010)
Stock-based compensation expense	(403,983)	(363,774)	(311,020)
Transaction costs	(21,839)	(22,769)	(55,935)
Impairment charges	—	—	(7,306)
Gain (loss) on asset sales	(3,976)	10,845	1,301
Interest income	36,268	2,644	8,654
Interest expense	(356,337)	(336,082)	(406,466)
Other income (expense)	(51,417)	(50,647)	6,913
Gain (loss) on debt extinguishment	327	(115,125)	(145,804)
Income before income taxes	$ 829,369	$ 608,952	$ 516,225

We also provide the following segment disclosures related to our operations as follows for the years ended December 31 (in thousands):

	2022	2021	2020
Depreciation and amortization:			
Americas	$ 931,357	$ 865,910	$ 729,611
EMEA	458,156	455,651	389,332
Asia-Pacific	346,695	334,729	304,426
Total	$ 1,736,208	$ 1,656,290	$ 1,423,369
Capital expenditures:			
Americas	$ 1,139,309	$ 970,217	$ 866,989
EMEA	750,569	1,049,279	888,239
Asia-Pacific	388,126	732,016	527,276
Total	$ 2,278,004	$ 2,751,512	$ 2,282,504

Our long-lived assets, including property, plant and equipment, net and operating lease right-of-use assets, are located in the following geographic areas as of December 31 (in thousands):

	2022	2021
Americas [1]	$ 7,532,125	$ 6,777,174
EMEA	5,577,498	5,125,341
Asia-Pacific	3,539,911	3,543,260
Total Property, plant and equipment, net	$ 16,649,534	$ 15,445,775

(1) Includes $6.0 billion and $5.4 billion, respectively, of property, plant and equipment, net attributed to the U.S. as of December 31, 2022 and 2021.

	2022	2021
Americas [1]	$ 263,148	$ 297,300
EMEA	440,139	470,330
Asia-Pacific	724,663	514,788
Total Operating lease right-of-use assets	$ 1,427,950	$ 1,282,418

(1) Includes $244.7 million and $271.0 million of operating lease ROU assets attributed to the U.S. as of December 31, 2022 and 2021, respectively.

18. Subsequent Events

Declaration of dividends

On February 15, 2023, we declared a quarterly cash dividend of $ 3.41 per share, which is payable on March 22, 2023 to our common stockholders of record as of the close of business on March 7, 2023.

Issuance of JPY Senior Notes

On February 7, 2023, we entered into an agreement to sell ¥ 77.28 billion in principal amount of new unsecured senior notes. On February 16, 2023, we settled ¥10.0 billion of such notes, or approximately $ 74.7 million based on the exchange rate on that date, with the remainder of the notes expected to be settled later in the first quarter of 2023.

EQUINIX INC.
SCHEDULE III - SCHEDULE OF REAL ESTATE AND ACCUMULATED DEPRECIATION
DECEMBER 31, 2022
(Dollars in Thousands)

	Initial Costs to Company (1)			Costs Capitalized Subsequent to Acquisition or Lease		Total Costs			
	Encumbrances	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Accumulated Depreciation (3)	Date of Acquisition or Lease (4)
Americas:									
AT1 ATLANTA (METRO)	$—	$—	$—	$—	$283,927	$—	$283,927	$(92,710)	2010
AT2 ATLANTA (METRO)	—	—	—	—	38,767	—	38,767	(32,030)	2010
AT3 ATLANTA (METRO)	—	—	—	—	4,388	—	4,388	(3,692)	2010
AT4 ATLANTA (METRO)	—	5,400	20,209	—	25,690	5,400	45,899	(15,817)	2017
AT5 ATLANTA (METRO)	—	—	5,011	—	2,028	—	7,039	(5,802)	2017
BG1 BOGOTÁ (METRO), COLOMBIA	—	—	8,779	617	3,673	617	12,452	(5,167)	2017
BG2 BOGOTÁ (METRO), COLOMBIA	—	3,970	—	—	25,210	3,970	25,210	(7)	2021
BO2 BOSTON (METRO)	—	2,500	30,383	—	37,485	2,500	67,868	(19,283)	2017
CH1 CHICAGO (METRO)	—	—	—	—	166,595	—	166,595	(115,407)	1999
CH2 CHICAGO (METRO)	—	—	—	—	120,460	—	120,460	(69,470)	2005
CH3 CHICAGO (METRO)	—	9,759	—	351	344,529	10,110	344,529	(156,159)	2006
CH4 CHICAGO (METRO)	—	—	—	—	22,924	—	22,924	(16,086)	2009
CH7 CHICAGO (METRO)	—	670	10,564	—	9,215	670	19,779	(6,936)	2017
CL1 CALGARY (METRO), CANADA	—	—	11,572	—	2,901	—	14,473	(5,639)	2020
CL2 CALGARY (METRO), CANADA	—	—	14,145	—	5,494	—	19,639	(6,782)	2020
CL3 CALGARY (METRO), CANADA	—	7,747	69,334	—	40,574	7,747	109,908	(13,069)	2020
CU1 CULPEPER (METRO)	—	1,019	37,581	—	5,708	1,019	43,289	(20,420)	2017
CU2 CULPEPER (METRO)	—	1,244	48,000	—	12,433	1,244	60,433	(21,599)	2017
CU3 CULPEPER (METRO)	—	1,088	37,387	—	15,016	1,088	52,403	(16,157)	2017
CU4 CULPEPER (METRO)	—	1,372	27,832	—	35,273	1,372	63,105	(15,482)	2017
DA1 DALLAS (METRO)	—	—	—	—	70,827	—	70,827	(43,070)	2000
DA2 DALLAS (METRO)	—	—	—	—	82,118	—	82,118	(37,387)	2010
DA3 DALLAS (METRO)	—	—	—	—	97,579	—	97,579	(47,698)	2010
DA4 DALLAS (METRO)	—	—	—	—	16,840	—	16,840	(10,500)	2010
DA6 DALLAS (METRO)	—	—	20,522	—	179,640	—	200,162	(58,551)	2012
DA7 DALLAS (METRO)	—	—	—	—	31,742	—	31,742	(19,321)	2015
DA9 DALLAS (METRO)	—	610	15,398	—	7,497	610	22,895	(8,599)	2017
DA11 DALLAS (METRO)	—	—	—	—	207,407	—	207,407	(26,487)	2018
INFOMART BUILDING DALLAS (METRO)	—	24,380	337,643	3,293	27,438	27,673	365,081	(52,990)	2018
DC1 WASHINGTON, DC (METRO)	—	—	—	—	5,780	—	5,780	(2,765)	1999
DC2 WASHINGTON, DC (METRO)	—	—	—	5,047	128,494	5,047	128,494	(98,592)	1999
DC3 WASHINGTON, DC (METRO)	—	—	37,451	—	52,183	—	89,634	(57,467)	2004
DC4 WASHINGTON, DC (METRO)	—	1,906	7,272	—	60,164	1,906	67,436	(46,836)	2005

	Initial Costs to Company [1]			Costs Capitalized Subsequent to Acquisition or Lease		Total Costs			
	Encumbrances	Land	Buildings and Improvements [2]	Land	Buildings and Improvements [2]	Land	Buildings and Improvements [2]	Accumulated Depreciation [3]	Date of Acquisition or Lease [4]
DC5 WASHINGTON, DC (METRO)	—	1,429	4,983	—	94,941	1,429	99,924	(73,905)	2005
DC6 WASHINGTON, DC (METRO)	—	1,429	5,082	—	94,521	1,429	99,603	(59,605)	2005
DC7 WASHINGTON, DC (METRO)	—	—	—	—	19,152	—	19,152	(15,565)	2010
DC10 WASHINGTON, DC (METRO)	—	—	44,601	—	90,071	—	134,672	(114,185)	2011
DC11 WASHINGTON, DC (METRO)	—	1,429	5,082	—	190,744	1,429	195,826	(82,458)	2005
DC12 WASHINGTON, DC (METRO)	—	—	101,783	—	82,863	—	184,646	(47,708)	2017
DC13 WASHINGTON, DC (METRO)	—	5,500	25,423	—	28,280	5,500	53,703	(19,950)	2017
DC14 WASHINGTON, DC (METRO)	—	2,560	33,511	—	15,026	2,560	48,537	(15,739)	2017
DC15 WASHINGTON, DC (METRO)	—	1,965	—	1,964	186,190	3,929	186,190	(23,019)	2018
DC16 WASHINGTON, DC (METRO)	—	—	—	—	139,800	—	139,800	—	2022
DC21 WASHINGTON, DC (METRO)	—	1,507	—	—	146,045	1,507	146,045	(13,291)	2019
DC97 WASHINGTON, DC (METRO)	—	—	2,021	—	1,944	—	3,965	(1,858)	2017
DE1 DENVER (METRO)	—	—	—	—	9,897	—	9,897	(9,002)	2010
DE2 DENVER (METRO)	—	5,240	23,053	—	32,706	5,240	55,759	(20,195)	2017
HO1 HOUSTON (METRO)	—	1,440	23,780	—	33,390	1,440	57,170	(20,311)	2017
KA1 KAMLOOPS (METRO), CANADA	—	2,929	46,983	—	16,510	2,929	63,493	(8,325)	2020
LA1 LOS ANGELES (METRO)	—	—	—	—	111,522	—	111,522	(79,280)	1999
LA2 LOS ANGELES (METRO)	—	—	—	—	10,610	—	10,610	(9,633)	2000
LA3 LOS ANGELES (METRO)	—	—	34,727	3,959	18,240	3,959	52,967	(43,819)	2005
LA4 LOS ANGELES (METRO)	—	19,333	137,630	—	80,458	19,333	218,088	(111,121)	2009
LA7 LOS ANGELES (METRO)	—	7,800	33,621	—	56,645	7,800	90,266	(20,968)	2017
LM1 LIMA (METRO), PERU	—	4,589	8,835	106	204	4,695	9,039	(347)	2022
MI1 MIAMI (METRO)	—	18,920	127,194	—	143,088	18,920	270,282	(89,270)	2017
MI2 MIAMI (METRO)	—	—	—	—	22,766	—	22,766	(16,253)	2010
MI3 MIAMI (METRO)	—	—	—	—	34,149	—	34,149	(22,588)	2012
MI6 MIAMI (METRO)	—	4,750	23,017	—	9,926	4,750	32,943	(14,906)	2017
MO1 MONTERREY (METRO), MEXICO	—	—	2,572	—	8,350	—	10,922	(1,673)	2020
MT1 MONTREAL (METRO), CANADA	—	—	76,932	—	17,721	—	94,653	(20,049)	2020
MT2 MONTREAL (METRO), CANADA	—	2,800	58,183	—	—	2,800	58,183	(4,457)	2022
MX1 MEXICO CITY (METRO), MEXICO	—	1,090	53,980	—	35,934	1,090	89,914	(13,119)	2020
MX2 MEXICO CITY (METRO), MEXICO	—	1,090	16,061	—	73,338	1,090	89,399	(4,446)	2020
NY1 NEW YORK (METRO)	—	—	—	—	71,417	—	71,417	(50,233)	1999
NY2 NEW YORK (METRO)	—	—	—	17,859	205,266	17,859	205,266	(136,262)	2000
NY3 NEW YORK (METRO)		—	—	38,484	146,996	38,484	146,996	(459)	2022
NY4 NEW YORK (METRO)	—	—	—	—	370,970	—	370,970	(222,348)	2006
NY5 NEW YORK (METRO)	—	—	—	—	300,831	—	300,831	(113,510)	2010
NY6 NEW YORK (METRO)	—	—	—	—	99,163	—	99,163	(23,004)	2010
NY7 NEW YORK (METRO)	—	—	24,660	—	175,830	—	200,490	(152,800)	2010

	Initial Costs to Company (1)			Costs Capitalized Subsequent to Acquisition or Lease		Total Costs			
	Encumbrances	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Accumulated Depreciation (3)	Date of Acquisition or Lease (4)
NY9 NEW YORK (METRO)	—	—	—	—	50,512	—	50,512	(40,850)	2010
NY11 NEW YORK (METRO)	—	2,050	58,717	—	40,862	2,050	99,579	(30,847)	2017
NY13 NEW YORK (METRO)	—	—	31,603	8,300	6,327	8,300	37,930	(20,446)	2017
OT1 OTTAWA (METRO), CANADA	—	1,549	39,128	—	1,931	1,549	41,059	(7,455)	2020
PH1 PHILADELPHIA (METRO)	—	—	—	—	44,543	—	44,543	(23,583)	2010
RJ1 RIO DE JANEIRO (METRO), BRAZIL	—	—	—	—	20,402	—	20,402	(16,387)	2011
RJ2 RIO DE JANEIRO (METRO), BRAZIL	—	—	2,012	1,245	68,500	1,245	70,512	(25,574)	2012
SE2 SEATTLE (METRO)	—	—	—	—	31,910	—	31,910	(26,961)	2010
SE3 SEATTLE (METRO)	—	—	1,760	—	101,820	—	103,580	(71,056)	2011
SE4 SEATTLE (METRO)	—	4,000	12,903	—	43,562	4,000	56,465	(14,506)	2017
SJ1 SAINT JOHN (METRO), CANADA	—	159	14,276	—	1,320	159	15,596	(2,612)	2020
SP1 SÃO PAULO (METRO), BRAZIL	—	—	10,188	—	23,290	—	33,478	(21,640)	2011
SP2 SÃO PAULO (METRO), BRAZIL	—	—	—	3,030	53,089	3,030	53,089	(38,500)	2011
SP3 SÃO PAULO (METRO), BRAZIL	—	7,222	72,997	391	78,637	7,613	151,634	(52,795)	2017
SP4 SÃO PAULO (METRO), BRAZIL	—	—	22,027	6,720	87,709	6,720	109,736	(26,415)	2017
ST1 SANTIAGO (METRO), CHILE	—	2,101	24,552	—	5,621	2,101	30,173	(1,471)	2022
ST2 SANTIAGO (METRO), CHILE	—	2,101	11,736	—	7,597	2,101	19,333	(694)	2022
ST3 SANTIAGO (METRO), CHILE	—	1,520	10,341	—	3,328	1,520	13,669	(834)	2022
ST4 SANTIAGO (METRO), CHILE	—	81	4,679	—	1,782	81	6,461	(375)	2022
SV1 SILICON VALLEY (METRO)	—	—	—	15,545	146,020	15,545	146,020	(104,313)	1999
SV2 SILICON VALLEY (METRO)	—	—	—	—	162,072	—	162,072	(110,329)	2003
SV3 SILICON VALLEY (METRO)	—	—	—	—	77,475	—	77,475	(45,246)	1999
SV4 SILICON VALLEY (METRO)	—	—	—	—	106,282	—	106,282	(31,327)	2005
SV5 SILICON VALLEY (METRO)	—	6,238	98,991	—	106,952	6,238	205,943	(99,928)	2010
SV6 SILICON VALLEY (METRO)	—	—	1,296	—	—	—	1,296	(1)	2010
SV8 SILICON VALLEY (METRO)	—	—	—	—	156,878	—	156,878	(48,495)	2010
SV10 SILICON VALLEY (METRO)	—	12,646	123,594	—	96,321	12,646	219,915	(54,124)	2017
SV11 SILICON VALLEY (METRO)	—	—	—	—	160,990	—	160,990	(9,621)	2019
SV12 SILICON VALLEY (METRO)	—	20,313	—	—	82,237	20,313	82,237	—	2015
SV13 SILICON VALLEY (METRO)	—	—	3,638	—	—	—	3,638	(3,426)	2017
SV14 SILICON VALLEY (METRO)	—	3,638	5,503	—	3,791	3,638	9,294	(3,654)	2017
SV15 SILICON VALLEY (METRO)	—	7,651	23,060	—	16,054	7,651	39,114	(14,181)	2017
SV16 SILICON VALLEY (METRO)	—	4,271	15,018	—	6,261	4,271	21,279	(8,075)	2017
SV17 SILICON VALLEY (METRO)	—	—	17,493	—	2,899	—	20,392	(16,090)	2017
TR1 TORONTO (METRO), CANADA	—	—	—	—	87,434	—	87,434	(39,215)	2010
TR2 TORONTO (METRO), CANADA	—	—	21,113	99,857	150,427	99,857	171,540	(37,700)	2015
TR4 TORONTO (METRO), CANADA	—	—	13,985	—	4,668	—	18,653	(8,360)	2020
TR5 MARKHAM (METRO), CANADA	—	—	24,913	—	1,660	—	26,573	(9,512)	2020

	Initial Costs to Company (1)			Costs Capitalized Subsequent to Acquisition or Lease		Total Costs			
	Encumbrances	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Accumulated Depreciation (3)	Date of Acquisition or Lease (4)
TR6 BRAMPTON (METRO), CANADA	—	9,386	58,704	2,463	2,682	11,849	61,386	(9,036)	2020
TR7 BRAMPTON (METRO), CANADA	—	9,193	71,966	—	21,999	9,193	93,965	(18,848)	2020
VA1 BURNABY (METRO), CANADA	—	—	4,668	—	5,562	—	10,230	(1,960)	2020
WI1 WINNIPEG (METRO), CANADA	—	—	57,234	—	3,141	—	60,375	(4,284)	2020
OTHERS (5)	—	88,430	50,135	1,743	66,789	90,173	116,924	(29,432)	Various
EMEA:									
AD1 ABU DHABI (METRO), UNITED ARAB EMIRATES	—	—	—	—	75,852	—	75,852	(19,448)	2017
AM1 AMSTERDAM (METRO), THE NETHERLANDS	—	—	—	—	90,330	—	90,330	(53,551)	2008
AM2 AMSTERDAM (METRO), THE NETHERLANDS	—	—	—	—	77,337	—	77,337	(35,060)	2008
AM3 AMSTERDAM (METRO), THE NETHERLANDS	—	—	27,099	—	125,357	—	152,456	(72,449)	2011
AM4 AMSTERDAM (METRO), THE NETHERLANDS	—	—	—	—	210,596	—	210,596	(45,083)	2016
AM5 AMSTERDAM (METRO), THE NETHERLANDS	—	—	92,199	—	13,183	—	105,382	(40,602)	2016
AM6 AMSTERDAM (METRO), THE NETHERLANDS	—	6,616	50,876	109	99,554	6,725	150,430	(39,066)	2016
AM7 AMSTERDAM (METRO), THE NETHERLANDS	—	—	7,397	—	136,812	—	144,209	(34,628)	2016
AM8 AMSTERDAM (METRO), THE NETHERLANDS	—	—	—	—	12,367	—	12,367	(6,686)	2016
AM11 AMSTERDAM (METRO), THE NETHERLANDS	—	—	6,405	391	12,328	391	18,733	(4,057)	2019
BA1 BARCELONA (METRO), SPAIN	—	—	9,443	—	22,555	—	31,998	(13,323)	2017
BA2 BARCELONA (METRO), SPAIN	—	7,808	—	—	2,575	7,808	2,575	—	2022
BX1 BORDEAUX (METRO), FRANCE	—	1,912	3,507	—	67,388	1,912	70,895	(1,980)	2020
DB1 DUBLIN (METRO), IRELAND	—	—	—	—	5,260	—	5,260	(4,512)	2016
DB2 DUBLIN (METRO), IRELAND	—	—	12,460	—	10,785	—	23,245	(12,457)	2016
DB3 DUBLIN (METRO), IRELAND	—	3,334	54,387	55	20,401	3,389	74,788	(27,038)	2016
DB4 DUBLIN (METRO), IRELAND	—	—	26,875	—	17,875	—	44,750	(12,402)	2016
DU1 DÜSSELDORF (METRO), GERMANY	—	—	—	7,740	32,870	7,740	32,870	(18,822)	2000
DX1 DUBAI (METRO), UNITED ARAB EMIRATES	—	—	—	—	117,994	—	117,994	(50,368)	2008
DX2 DUBAI (METRO), UNITED ARAB EMIRATES	—	—	—	—	699	—	699	(426)	2017
DX3 DUBAI (METRO), UNITED ARAB EMIRATES	—	6,738	—	—	12,839	6,738	12,839	(602)	2020
EN1 ENSCHEDE (METRO), THE NETHERLANDS	—	—	—	—	36,040	—	36,040	(25,126)	2008

	Initial Costs to Company (1)			Costs Capitalized Subsequent to Acquisition or Lease		Total Costs			
	Encumbrances	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Accumulated Depreciation (3)	Date of Acquisition or Lease (4)
FR2 FRANKFURT (METRO), GERMANY	—	—	—	18,629	587,688	18,629	587,688	(182,900)	2007
FR4 FRANKFURT (METRO), GERMANY	—	11,578	9,307	191	99,825	11,769	109,132	(42,990)	2009
FR5 FRANKFURT (METRO), GERMANY	30,310	—	—	13,356	247,177	13,356	247,177	(64,932)	2012
FR6 FRANKFURT (METRO), GERMANY	—	—	—	—	134,128	—	134,128	(39,491)	2016
FR7 FRANKFURT (METRO), GERMANY	—	—	43,634	—	42,576	—	86,210	(35,508)	2016
FR8 FRANKFURT (METRO), GERMANY	—	19,202	58,199	—	66,707	19,202	124,906	(6,260)	2020
FR13 FRANKFURT (METRO), GERMANY	—	—	—	—	6,319	—	6,319	—	2021
GN1 GENOA (METRO), ITALY	—	—	1,988	—	20,367	—	22,355	(757)	2020
GV1 GENEVA (METRO), SWITZERLAND	—	—	—	—	26,855	—	26,855	(13,565)	2004
GV2 GENEVA (METRO), SWITZERLAND	—	—	—	—	54,968	—	54,968	(24,168)	2009
HE3 HELSINKI (METRO), FINLAND	—	—	—	—	14,226	—	14,226	(9,835)	2016
HE4 HELSINKI (METRO), FINLAND	—	—	29,092	—	6,096	—	35,188	(22,383)	2016
HE5 HELSINKI (METRO), FINLAND	—	—	7,564	—	18,921	—	26,485	(8,621)	2016
HE6 HELSINKI (METRO), FINLAND	—	—	17,204	1,498	33,763	1,498	50,967	(17,833)	2016
HE7 HELSINKI (METRO), FINLAND	—	7,348	6,946	630	60,952	7,978	67,898	(8,497)	2018
HH1 HAMBURG (METRO), GERMANY		3,612	5,360	356	47,517	3,968	52,877	(6,896)	2018
IL2 ISTANBUL (METRO), TURKEY	—	14,460	39,289	—	66,384	14,460	105,673	(14,167)	2017
LD3 LONDON (METRO), UNITED KINGDOM	—	—	—	—	17,307	—	17,307	(15,285)	2000
LD4 LONDON (METRO), UNITED KINGDOM	—	—	23,044	—	139,253	—	162,297	(65,609)	2007
LD5 LONDON (METRO), UNITED KINGDOM	—	—	16,412	—	174,138	—	190,550	(103,475)	2010
LD6 LONDON (METRO), UNITED KINGDOM	—	—	—	—	140,024	—	140,024	(48,378)	2013
LD7 LONDON (METRO), UNITED KINGDOM	—	—	—	189,922	267,217	189,922	267,217	(26,142)	2018
LD8 LONDON (METRO), UNITED KINGDOM	—	—	107,544	—	80,927	—	188,471	(61,761)	2016
LD9 LONDON (METRO), UNITED KINGDOM	—	—	181,431	—	170,539	—	351,970	(107,492)	2016
LD10 LONDON (METRO), UNITED KINGDOM	—	—	40,251	—	114,520	—	154,771	(29,023)	2017
LS1 LISBON (METRO), PORTUGAL	—	—	7,374	3,306	20,075	3,306	27,449	(5,714)	2017
LAGOS 1 (METRO), PORTUGAL	—	1,515	12,470	3,432	116,045	4,947	128,515	(6,436)	2022
MA1 MANCHESTER (METRO), UNITED KINGDOM	—	—	—	—	17,337	—	17,337	(9,286)	2016
MA2 MANCHESTER (METRO), UNITED KINGDOM	—	—	—	—	9,629	—	9,629	(8,655)	2016
MA3 MANCHESTER (METRO), UNITED KINGDOM	—	—	44,931	—	18,012	—	62,943	(31,669)	2016
MA4 MANCHESTER (METRO), UNITED KINGDOM	—	—	6,697	—	7,954	—	14,651	(8,161)	2016
MA5 MANCHESTER (METRO), UNITED KINGDOM	—	3,671	6,874	—	80,923	3,671	87,797	(2,124)	2020
MD1 MADRID (METRO), SPAIN	—	—	7,917	—	7,488	—	15,405	(6,637)	2017
MD2 MADRID (METRO), SPAIN	—	—	40,952	—	84,822	—	125,774	(43,837)	2017
MD6 MADRID (METRO), SPAIN	—	—	—	—	1,226	—	1,226	(2)	2022

		Initial Costs to Company (1)		Costs Capitalized Subsequent to Acquisition or Lease		Total Costs			
	Encumbrances	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Accumulated Depreciation (3)	Date of Acquisition or Lease (4)
ML2 MILAN (METRO), ITALY	—	—	—	—	23,477	—	23,477	(18,642)	2016
ML3 MILAN (METRO), ITALY	—	—	—	3,399	43,778	3,399	43,778	(16,477)	2016
ML5 MILAN (METRO), ITALY	—	6,479	20,952	—	86,130	6,479	107,082	(5,244)	2019
MU1 MUNICH (METRO), GERMANY	—	—	—	—	35,906	—	35,906	(18,726)	2007
MU3 MUNICH (METRO), GERMANY	—	—	—	—	6,100	—	6,100	(3,048)	2010
MU4 MUNICH (METRO), GERMANY		11,399	35,120	—	54,651	11,399	89,771	(3,558)	2020
PA2 & PA3 PARIS (METRO), FRANCE	—	—	29,615	22,190	316,306	22,190	345,921	(149,239)	2007
PA4 PARIS (METRO), FRANCE	—	1,524	9,503	—	232,040	1,524	241,543	(92,574)	2011
PA5 PARIS (METRO), FRANCE	—	—	16,554	—	10,310	—	26,864	(9,499)	2016
PA6 PARIS (METRO), FRANCE	—	—	—	—	83,383	—	83,383	(40,643)	2016
PA7 PARIS (METRO), FRANCE	—	—	—	—	24,547	—	24,547	(13,869)	2016
PA10 PARIS (METRO), FRANCE	—	—	—	—	132,736	—	132,736	(1,382)	2021
SA1 SEVILLE (METRO), SPAIN	—	—	1,567	—	1,472	—	3,039	(2,300)	2017
SK1 STOCKHOLM, (METRO), SWEDEN	—	—	15,495	—	67,721	—	83,216	(13,626)	2016
SK2 STOCKHOLM, (METRO), SWEDEN	—	—	80,148	3,391	65,837	3,391	145,985	(43,237)	2016
SK3 STOCKHOLM, (METRO), SWEDEN	—	—	—	—	24,507	—	24,507	(7,424)	2016
SO1 SOFIA (METRO), BULGARIA	—	—	5,236	—	4,401	—	9,637	(3,736)	2016
SO2 SOFIA (METRO), BULGARIA	—	2,592	—	—	22,529	2,592	22,529	(2,804)	2017
WA1 WARSAW (METRO), POLAND	—	—	5,950	—	23,184	—	29,134	(11,358)	2016
WA2 WARSAW (METRO), POLAND	—	—	4,709	—	8,588	—	13,297	(6,165)	2016
WA3 WARSAW (METRO), POLAND	—	2,443	—	—	60,513	2,443	60,513	(5,344)	2017
ZH2 ZURICH (METRO), SWITZERLAND	—	—	—	—	5,938	—	5,938	(4,609)	2002
ZH4 ZURICH (METRO), SWITZERLAND	—	—	11,284	—	46,864	—	58,148	(30,276)	2009
ZH5 ZURICH (METRO), SWITZERLAND	—	—	—	7,971	242,681	7,971	242,681	(45,823)	2009
ZW1 ZWOLLE (METRO), THE NETHERLANDS	—	—	—	—	10,186	—	10,186	(9,527)	2008
OTHERS (5)	—	56,430	18,309	35,479	206,800	91,909	225,109	(53,220)	Various
Asia-Pacific:									
AE1 ADELAIDE (METRO), AUSTRALIA	—	2,574	1,015	—	2,393	2,574	3,408	(1,152)	2018
BR1 BRISBANE (METRO), AUSTRALIA	—	3,064	1,053	—	3,342	3,064	4,395	(1,112)	2018
CA1 CANBERRA (METRO), AUSTRALIA	—	—	18,410	—	7,195	—	25,605	(4,237)	2018
CN1 CHENNAI (METRO), INDIA	—	—	—	8,003	5,415	8,003	5,415	(65)	2022
HK1 HONG KONG (METRO), CHINA	—	—	—	—	300,810	—	300,810	(130,874)	2003
HK2 HONG KONG (METRO), CHINA	—	—	—	—	242,921	—	242,921	(189,170)	2010
HK3 HONG KONG (METRO), CHINA	—	—	—	—	183,050	—	183,050	(101,415)	2012
HK4 HONG KONG (METRO), CHINA	—	—	—	—	97,919	—	97,919	(32,004)	2012
HK5 HONG KONG (METRO), CHINA	—	—	70,002	—	43,089	—	113,091	(33,571)	2017
MB1 MUMBAI (METRO), INDIA	—	515	28,457	—	2,761	515	31,218	(3,293)	2021

	Initial Costs to Company (1)			Costs Capitalized Subsequent to Acquisition or Lease		Total Costs			
	Encumbrances	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Accumulated Depreciation (3)	Date of Acquisition or Lease (4)
MB2 MUMBAI (METRO), INDIA	—	—	54,494	—	—	—	54,494	(6,746)	2021
MB3 MUMBAI (METRO), INDIA	—	—	—	28,948	6,362	28,948	6,362	—	2022
ME1 MELBOURNE (METRO), AUSTRALIA	—	14,478	—	—	91,595	14,478	91,595	(32,366)	2013
ME2 MELBOURNE (METRO), AUSTRALIA	—	—	—	—	102,634	—	102,634	(11,468)	2018
ME4 MELBOURNE (METRO), AUSTRALIA	—	3,323	84,175	—	10,472	3,323	94,647	(28,739)	2018
ME5 MELBOURNE (METRO), AUSTRALIA	—	6,455	4,094	—	4,606	6,455	8,700	(3,412)	2018
OS1 OSAKA (METRO), JAPAN	—	—	14,876	—	94,581	—	109,457	(45,839)	2013
OS3 OSAKA (METRO), JAPAN	—	—	—	—	199,004	—	199,004	(19,415)	2020
PE1 PERTH (METRO), AUSTRALIA	—	1,307	1,337	—	2,136	1,307	3,473	(759)	2018
PE2 PERTH (METRO), AUSTRALIA	—	—	16,327	—	15,983	—	32,310	(10,059)	2018
PE3 PERTH (METRO), AUSTRALIA	—	—	—	—	56,947	—	56,947	(3,636)	2020
SG1 SINGAPORE (METRO)	—	—	—	—	302,976	—	302,976	(147,603)	2003
SG2 SINGAPORE (METRO)	—	—	—	—	346,957	—	346,957	(247,585)	2008
SG3 SINGAPORE (METRO)	—	—	34,844	—	246,729	—	281,573	(88,991)	2013
SG4 SINGAPORE (METRO)	—	—	54,602	—	160,563	—	215,165	(31,593)	2019
SG5 SINGAPORE (METRO)	—	—	—	—	327,608	—	327,608	(18,523)	2019
SH2 SHANGHAI (METRO), CHINA	—	—	—	—	7,420	—	7,420	(4,366)	2012
SH3 SHANGHAI (METRO), CHINA	—	—	7,066	—	13,555	—	20,621	(8,267)	2012
SH5 SHANGHAI (METRO), CHINA	—	—	11,284	—	23,558	—	34,842	(18,366)	2012
SH6 SHANGHAI (METRO), CHINA	—	—	16,545	—	34,902	—	51,447	(8,810)	2017
SL1 SEOUL (METRO), SOUTH KOREA	—	—	29,236	—	35,968	—	65,204	(19,149)	2019
SY1 SYDNEY (METRO), AUSTRALIA	—	—	—	80,706	38,161	80,706	38,161	(24,626)	2003
SY2 SYDNEY (METRO), AUSTRALIA	—	—	3,080	—	26,629	—	29,709	(23,913)	2008
SY3 SYDNEY (METRO), AUSTRALIA	—	—	8,712	—	143,068	—	151,780	(93,293)	2010
SY4 SYDNEY (METRO), AUSTRALIA	—	—	—	—	177,003	—	177,003	(64,763)	2014
SY5 SYDNEY (METRO), AUSTRALIA	—	79,613	—	—	246,176	79,613	246,176	(24,747)	2018
SY6 SYDNEY (METRO), AUSTRALIA	—	8,593	64,197	—	19,230	8,593	83,427	(15,713)	2018
SY7 SYDNEY (METRO), AUSTRALIA	—	2,662	47,350	—	4,531	2,662	51,881	(10,917)	2018
TY1 TOKYO (METRO), JAPAN	—	—	—	—	32,784	—	32,784	(21,073)	2000
TY2 TOKYO (METRO), JAPAN	—	—	—	—	89,367	—	89,367	(59,814)	2006
TY3 TOKYO (METRO), JAPAN	—	—	—	—	67,404	—	67,404	(41,572)	2010
TY4 TOKYO (METRO), JAPAN	—	—	—	—	72,430	—	72,430	(37,356)	2012
TY5 TOKYO (METRO), JAPAN	—	—	102	—	55,213	—	55,315	(21,862)	2014
TY6 TOKYO (METRO), JAPAN	—	—	37,941	—	12,852	—	50,793	(43,370)	2015
TY7 TOKYO (METRO), JAPAN	—	—	13,175	—	6,109	—	19,284	(14,325)	2015
TY8 TOKYO (METRO), JAPAN	—	—	53,848	—	8,638	—	62,486	(30,732)	2015
TY9 TOKYO (METRO), JAPAN	—	—	106,710	—	11,416	—	118,126	(82,849)	2015
TY10 TOKYO (METRO), JAPAN	—	—	69,881	—	7,226	—	77,107	(29,456)	2015

	Initial Costs to Company (1)			Costs Capitalized Subsequent to Acquisition or Lease		Total Costs			
	Encumbrances	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Land	Buildings and Improvements (2)	Accumulated Depreciation (3)	Date of Acquisition or Lease (4)
TY11 TOKYO (METRO), JAPAN	—	—	22,099	—	225,851	—	247,950	(28,436)	2018
TY15 TOKYO (METRO), JAPAN	—	—	—	—	25,741	—	25,741	—	2022
OTHERS (5)	—	—	1,733	—	70,572	—	72,305	(11,175)	Various
TOTAL LOCATIONS	**$30,310**	**$621,259**	**$4,697,242**	**$640,676**	**$17,844,178**	**$1,261,935**	**$22,541,420**	**$(8,094,898)**	

(1) The initial cost was $0 if the lease of the respective IBX was classified as an operating lease.
(2) Building and improvements include all fixed assets except for land.
(3) Buildings and improvements are depreciated on a straight-line basis over estimated useful live as described under described in Note 1 within the Consolidated Financial Statements.
(4) Date of lease or acquisition represents the date we leased the facility or acquired the facility through purchase or acquisition.
(5) Includes various IBXs that are under initial development and costs incurred at certain central locations supporting various IBX functions.

The aggregate gross cost of our properties for federal income tax purpose approximated $ 31.6 billion (unaudited) as of December 31, 2022.

The following table reconciles the historical cost of our properties for financial reporting purposes for each of the years in the three-year period ended December 31, 2022 (in thousands).

Gross Fixed Assets:

	2022	2021	2020
Balance, beginning of period	$ 21,906,055	$ 20,161,785	$ 16,927,332
Additions (including acquisitions and improvements)	3,250,576	2,977,992	3,110,907
Disposals	(543,545)	(648,516)	(446,864)
Foreign currency transaction adjustments and others	(809,731)	(585,206)	570,410
Balance, end of year	$ 23,803,355	$ 21,906,055	$ 20,161,785

Accumulated Depreciation:

	2022	2021	2020
Balance, beginning of period	$ (7,274,860)	$ (6,399,477)	$ (5,329,182)
Additions (depreciation expense)	(1,268,177)	(1,224,874)	(1,036,452)
Disposals	230,268	149,231	109,230
Foreign currency transaction adjustments and others	217,871	200,260	(143,073)
Balance, end of year	$ (8,094,898)	$ (7,274,860)	$ (6,399,477)

Exhibit 4.38

DESCRIPTION OF SECURITIES REGISTERED UNDER SECTION 12 OF THE SECURITIES EXCHANGE ACT

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is based upon our restated certificate of incorporation, as amended (the “Restated Certificate of Incorporation”), our bylaws, as amended (the “Bylaws”), and applicable provisions of law. We have summarized certain portions of the Restated Certificate of Incorporation and Bylaws below. The summary is not complete. The Restated Certificate of Incorporation and Bylaws are incorporated by reference as exhibits 3.1 and 3.6, respectively, to our Annual Report on Form 10-K. You should read the Restated Certificate of Incorporation and Bylaws for the provisions that are important to you.

Certain provisions of the Delaware General Corporation Law (the “DGCL”), the Restated Certificate of Incorporation and Bylaws summarized in the following paragraphs may have an anti-takeover effect. This may delay, defer or prevent a tender offer or takeover attempt that a stockholder might consider in its best interests, including those attempts that might result in a premium over the market price for the shares held by such stockholder.

Authorized Capital Stock

Under our Restated Certificate of Incorporation, our authorized capital stock consists of 300,000,000 shares of common stock, par value $0.001 per share, and 100,000,000 shares of preferred stock, $0.001 par value per share of which 25,000,000 is designated Series A, 25,000,000 is designated as Series A-1 and 50,000,000 is undesignated. As of December 31, 2022, there were issued and outstanding:

- 92,620,703 shares of our common stock (not counting shares held in treasury);
- restricted stock units covering an aggregate of 1,445,692 shares of our common stock;
- restricted stock awards covering 48,799 shares of our common stock; and
- zero shares of our preferred stock.

Common Stock

The holders of our common stock are entitled to one vote per share on all matters to be voted on by the stockholders. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by the board of directors out of funds legally available for the payment of dividends. All dividends are non-cumulative. In the event of the liquidation, dissolution or winding up of Equinix, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock, if any, then outstanding. Our common stock has no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of our common stock are fully paid and nonassessable.

Our common stock is listed on the Nasdaq Global Select Market under the symbol “EQIX.”

Preferred Stock

Preferred stock may be issued from time to time in one or more series, each of which is to have the voting powers, designation, preferences and relative, participating, optional or other special rights and qualifications, limitations or restrictions thereof as are stated and expressed in our Restated Certificate of Incorporation, or in a resolution or resolutions providing for the issue of that series adopted by our board of directors.

Our board of directors has the authority, without stockholder approval, to create one or more series of preferred stock and, with respect to each series, to fix or alter as permitted by law, among other things, the number of shares of the series and the designation thereof, dividend rights, dividend rate, conversion rights, voting rights, rights and terms of any redemption, redemption price or prices and liquidation preferences.

The preferred stock will be issued under a certificate of designations relating to each series of preferred stock and is also subject to our Restated Certificate of Incorporation.

Restrictions on Ownership and Transfer

To facilitate compliance with the ownership limitations applicable to a real estate investment trust ("REIT") under the Internal Revenue Code of 1986, as amended (the "Code"), our Restated Certificate of Incorporation contains restrictions on the ownership and transfer of our capital stock.

These ownership and transfer restrictions could delay, defer or prevent a transaction or a change in control that might involve a premium price for our common stock or that our stockholders might otherwise deem to be in their best interests.

For us to qualify for taxation as a REIT under the Code, our capital stock must be beneficially owned by 100 or more persons during at least 335 days of a taxable year of 12 months or during a proportionate part of a shorter taxable year. Also, not more than 50% of the value of the outstanding shares of our capital stock may be owned, directly or indirectly, by five or fewer "individuals" (as defined in the Code to include certain entities such as (private foundations) during the last half of a taxable year. To facilitate compliance with these ownership requirements and other requirements for continued qualification as a REIT and to otherwise protect us from the consequences of a concentration of ownership among our stockholders, our Restated Certificate of Incorporation contains provisions restricting the ownership or transfer of shares of capital stock.

The relevant sections of our Restated Certificate of Incorporation provide that, subject to the exceptions and the constructive ownership rules described below, no person (as defined in our Restated Certificate of Incorporation) may beneficially or constructively own more than 9.8% in value of the aggregate of outstanding shares of capital stock, including common stock and preferred stock, or more than 9.8% in value or number (whichever is more restrictive) of the outstanding shares of any class or series of capital stock. We refer to these restrictions as the "ownership limits."

The applicable constructive ownership rules under the Code are complex and may cause capital stock owned actually or constructively by an individual or entity to be treated as owned by another individual or entity. As a result, the acquisition of less than 9.8% in value of outstanding capital stock or less than 9.8% in value or number of outstanding shares of any class or series of capital stock (including through the acquisition of an interest in an entity that owns, actually or constructively, any class or series of capital stock) by an individual or entity could nevertheless cause that individual or entity, or another individual or entity, to own, constructively or beneficially, in excess of 9.8% in value of outstanding capital stock or 9.8% in value or number of outstanding shares of any class or series of capital stock.

In addition to the ownership limits, our Restated Certificate of Incorporation prohibits any person from actually or constructively owning shares of capital stock to the extent that such ownership would cause any of our income that would otherwise qualify as "rents from real property" for purposes of Section 856(d) of the Code to fail to qualify as such.

Our board of directors has in the past granted ownership limitation waivers and may, in its sole discretion, in the future grant such a waiver to a person exempting them from the ownership limits and certain other REIT limits on ownership and transfer of capital stock described above, and may establish a different limit on ownership for any such person. However, our board of directors may not exempt any person whose ownership of outstanding capital stock in violation of these limits would result in our failing to qualify as a

REIT. In order to be considered by our board of directors for an ownership limitation waiver or a different limit on ownership, a person must make such representations and undertakings as are reasonably necessary to ascertain that such person's beneficial or constructive ownership of capital stock will not now or in the future jeopardize our ability to qualify as a REIT under the Code and must generally agree that any violation or attempted violation of such representations or undertakings (or other action that is contrary to the ownership limits and certain other REIT limits on ownership and transfer of capital stock described above) will result in the shares of capital stock being automatically transferred to a trust as described below. As a condition of its waiver, our board of directors may require an opinion of counsel or Internal Revenue Service ruling satisfactory to our board of directors with respect to our qualification as a REIT and may impose such other conditions as it deems appropriate in connection with the granting of the waiver or a different limit on ownership.

In connection with the waiver of the ownership limits or at any other time, our board of directors may from time to time increase the ownership limits for one or more persons and decrease the ownership limits for all other persons; provided that the new ownership limits may not, after giving effect to such increase and under certain assumptions stated in our Restated Certificate of Incorporation, result in us being "closely held" within the meaning of Section 856(h) of the Code (without regard to whether the ownership interests are held during the last half of a taxable year). Reduced ownership limits will not apply to any person whose percentage ownership of total shares of capital stock or of the shares of a class or series of capital stock, as applicable, is in excess of such decreased ownership limits until such time as such person's percentage of total shares of capital stock or of the shares of a class or series of capital stock, as applicable, equals or falls below the decreased ownership limits, but any further acquisition of capital stock in excess of such percentage will be in violation of the ownership limits.

Our Restated Certificate of Incorporation further prohibits:

- any person from transferring shares of capital stock if such transfer would result in shares of capital stock being beneficially owned by fewer than 100 persons (determined without reference to any rules of attribution); and
- any person from beneficially or constructively owning shares of capital stock if such ownership would result in our failing to qualify as a REIT.

The foregoing provisions on transferability and ownership will not apply if our board of directors determines that it is no longer in our best interests to attempt to qualify, or to continue to qualify, as a REIT.

Any person who acquires or attempts or intends to acquire beneficial or constructive ownership of shares of capital stock that will or may violate the ownership limits or any of the other foregoing restrictions on transferability and ownership will be required to give notice to us immediately (or, in the case of a proposed or attempted transaction, at least 15 days prior to such transaction) and provide us with such other information as we may request in order to determine the effect, if any, of such transfer on our qualification as a REIT.

Pursuant to our Restated Certificate of Incorporation, if there is any purported transfer of our capital stock or other event or change of circumstances that, if effective or otherwise, would violate any of the restrictions described above, then the number of shares causing the violation (rounded up to the nearest whole share) will be automatically transferred to a trust for the exclusive benefit of a designated charitable beneficiary, except that any transfer that results in the violation of the restriction relating to our capital stock being beneficially owned by fewer than 100 persons will be automatically void and of no force or effect. The automatic transfer will be effective as of the close of business on the business day prior to the date of the purported transfer or other event or change of circumstances that requires the transfer to the trust. We refer below to the person that would have owned the shares if they had not been transferred to the trust as the purported transferee. Any ordinary dividend paid to the purported transferee, prior to our discovery that the shares had been automatically transferred to a trust as described above, must be repaid to a trustee designated in accordance with the Restated Certificate of Incorporation upon demand. Our

Restated Certificate of Incorporation also provides for adjustments to the entitlement to receive extraordinary dividends and other distributions as between the purported transferee and the trust. If the transfer to the trust as described above is not automatically effective, for any reason, to prevent violation of the applicable restriction contained in our Restated Certificate of Incorporation, then the transfer of the excess shares will be automatically void and of no force or effect.

Shares of our capital stock transferred to the trustee are deemed to be offered for sale to us or our designee at a price per share equal to the lesser of (i) the price per share in the transaction that resulted in such transfer to the trust or, if the purported transferee did not give value for the shares in connection with the event causing the shares to be held in trust (e.g., in the case of a gift, devise or other such transaction), the market price at the time of such event and (ii) the market price on the date we accept, or our designee accepts, such offer. We have the right to accept such offer until the trustee has sold the shares of our capital stock held in the trust pursuant to the clauses described below. Upon a sale to us, the interest of the charitable beneficiary in the shares sold terminates and the trustee must distribute the net proceeds of the sale to the purported transferee, except that the trustee may reduce the amount payable to the purported transferee by the amount of any ordinary dividends that we paid to the purported transferee prior to our discovery that the shares had been transferred to the trust and that is owed by the purported transferee to the trustee as described above. Any net sales proceeds and extraordinary dividends in excess of the amount payable to the purported transferee shall be immediately paid to the charitable beneficiary, and any ordinary dividends held by the trustee with respect to such capital stock will be promptly paid to the charitable beneficiary.

If we do not buy the shares, the trustee must, as soon as reasonably practicable (and, if the shares are listed on a national securities exchange, within 20 days) after receiving notice from us of the transfer of shares to the trust, sell the shares to a person or entity who could own the shares without violating the restrictions described above. Upon such a sale, the trustee must distribute to the purported transferee an amount equal to the lesser of (i) the price paid by the purported transferee for the shares or, if the purported transferee did not give value for the shares in connection with the event causing the shares to be held in trust (e.g., in the case of a gift, devise or other such transaction), the market price of the shares on the day of the event causing the shares to be held in the trust, and (ii) the sales proceeds (net of commissions and other expenses of sale) received by the trustee for the shares. The trustee may reduce the amount payable to the purported transferee by the amount of any ordinary dividends that we paid to the purported transferee before our discovery that the shares had been transferred to the trust and that is owed by the purported transferee to the trustee as described above. Any net sales proceeds in excess of the amount payable to the purported transferee will be immediately paid to the charitable beneficiary, together with any ordinary dividends held by the trustee with respect to such capital stock. In addition, if prior to discovery by us that shares of our capital stock have been transferred to a trust, such shares of capital stock are sold by a purported transferee, then such shares will be deemed to have been sold on behalf of the trust and, to the extent that the purported transferee received an amount for or in respect of such shares that exceeds the amount that such purported transferee was entitled to receive as described above, such excess amount shall be paid to the trustee upon demand. The purported transferee has no rights in the shares held by the trustee.

The trustee will be indemnified by us or from the proceeds of sales of capital stock in the trust for its costs and expenses reasonably incurred in connection with conducting its duties and satisfying its obligations under our Restated Certificate of Incorporation. The trustee will also be entitled to reasonable compensation for services provided as determined by agreement between the trustee and the board of directors, which compensation may be funded by us or the trust. If we pay any such indemnification or compensation, we are entitled on a first priority basis (subject to the trustee's indemnification and compensation rights) to be reimbursed from the trust. To the extent the trust funds any such indemnification and compensation, the amounts available for payment to a purported transferee (or the charitable beneficiary) would be reduced.

The trustee will be designated by us and must be unaffiliated with us and with any purported transferee. Prior to the sale of any shares by the trust, the trustee will receive, in trust for the beneficiary, all distributions paid by us with respect to the shares, and may also exercise all voting rights with respect to the shares.

Subject to the DGCL, effective as of the date that the shares have been transferred to the trust, the trustee will have the authority, at the trustee's sole discretion:

- to rescind as void any vote cast by a purported transferee prior to our discovery that the shares have been transferred to the trust; and
- to recast the vote in accordance with the desires of the trustee acting for the benefit of the charitable beneficiary of the trust.

However, if we have already taken corporate action, then the trustee may not rescind and recast the vote.

In addition, if the board of directors determines that a proposed or purported transfer would violate the restrictions on ownership and transfer of our capital stock set forth in our Restated Certificate of Incorporation, the board of directors may take such action as it deems advisable to refuse to give effect to or to prevent such violation, including but not limited to, causing us to repurchase shares of our capital stock, refusing to give effect to the transfer on our books or instituting proceedings to enjoin the transfer.
From time to time, at our request, every person that is an owner of 5% or more (or such lower percentage as required by the Code or the Treasury regulations thereunder) of the outstanding shares of any class or series of our capital stock, must provide us written notice of its name and address, the number of shares of each class and series of our capital stock that the person beneficially owns and a description of the manner in which the shares are held. Each such owner must also provide us with such additional information as we may request in order to determine the effect, if any, of such owner's beneficial ownership on our qualification as a REIT and to ensure compliance with the ownership limits. In addition, each beneficial owner or constructive owner of our capital stock, and any person (including the stockholder of record) who is holding shares of our capital stock for a beneficial owner or constructive owner will, upon demand, be required to provide us with such information as we may request in good faith in order to determine our qualification as a REIT and to comply with the requirements of any taxing authority or governmental authority or to determine such compliance.

Anti-Takeover Effects of Provisions of Our Restated Certificate of Incorporation, Bylaws and Delaware law

Provisions of our Restated Certificate of Incorporation and Bylaws may delay or discourage transactions involving an actual or potential change in control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock.

Among other things, our Restated Certificate of Incorporation and Bylaws:

- permit our board of directors to issue up to 100,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate;
- provide that, subject to the terms of any series of preferred stock, the authorized number of directors may be changed only by resolution of the board of directors;
- provide that, subject to the terms of any series of preferred stock, all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- eliminate the personal liability of our directors for monetary damages resulting from breaches of their fiduciary duty to the extent permitted by the DGCL and indemnify our directors and officers to the fullest extent permitted by the DGCL;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner, and also specify requirements as to the form and content of a stockholder's notice;

- do not provide for cumulative voting rights, therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose;
- provide that, subject to exceptions, certain waivers we may grant and constructive ownership rules, no person may own, or be deemed to own by virtue of the attribution provisions of the Code, in excess of (i) 9.8% in value of the outstanding shares of all classes or series of Equinix stock or (ii) 9.8% in value or number (whichever is more restrictive) of the outstanding shares of any class or series of Equinix stock (as described above in "Restrictions on Ownership and Transfer");
- provide that our Bylaws can be amended or repealed at any regular or special meeting of stockholders or by the board of directors;
- permit stockholders to act by written consent so long as stockholders holding at least 25% of the voting power of the outstanding capital stock request that the board of directors set a record date for the action by written consent, and in connection with such a request for the establishment of a record date, provide certain information, make certain representations and comply with certain requirements relating to the proposed action and their ownership of our stock; and
- provide that special meetings of our stockholders may be called in limited circumstances. Special meetings of stockholders may be called by our board of directors or the chairman of the board of directors, the President or the Secretary and may not be called by any other person. A special meeting of stockholders shall be called by our Secretary at the written request of holders of record of at least 15% of the voting power of our outstanding capital stock entitled to vote on the matters to be brought before the proposed special meeting.

Delaware Takeover Statute. We are subject to Section 203 of the DGCL, which regulates corporate acquisitions. DGCL Section 203 restricts the ability of certain Delaware corporations, including those whose securities are listed on the Nasdaq Global Select Market, from engaging under certain circumstances in a business combination with any interested stockholder for three years following the date that such stockholder became an interested stockholder. For purposes of DGCL Section 203, a business combination includes, among other things, a merger or consolidation involving us and the interested stockholder and the sale of 10% or more of our assets. In general, DGCL Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of our outstanding voting stock and any entity or person affiliated with or controlling or controlled by such entity or person. A Delaware corporation may opt out of DGCL Section 203 with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from amendments approved by the holders of at least a majority of the corporation's outstanding voting shares. We have not opted out of the provisions of DGCL Section 203 in our Restated Certificate of Incorporation or Bylaws.

Forum Selection

Our bylaws include a forum selection provision providing that, unless the Company consents in writing, a state court located in the State of Delaware (or, if no state court located within the State of Delaware has jurisdiction, the federal district court for the District of Delaware) will be the sole and exclusive forum for any stockholder to bring any derivative action, any action asserting a claim of breach of fiduciary duties, any action asserting a claim arising from a provision of the Delaware General Corporation Law or the certificate of incorporation or our bylaws or any action asserting a claim governed by the internal affairs doctrine. There is uncertainty as to whether a court would enforce this provision with respect to claims brought to enforce any duty or liability under the Securities Act and our stockholders cannot waive compliance with the federal securities laws and the rules and regulations thereunder.

Transfer Agent and Registrar

The transfer agent and registrar for the shares of our common stock is Computershare Trust Company, N.A.

Description of 0.250% Senior Notes due 2027 and 1.000% Senior Notes due 2033

The following description of the 0.250% Senior Notes due 2027 (the "2027 Euro Notes") and 1.000% Senior Notes due 2033 (the "2033 Euro Notes" and, together with the 2027 Euro Notes, the "Notes") is a summary and does not purport to be complete. The Notes are subject to and qualified in their entirety by reference to the indenture, dated as of December 12, 2017 (the "2017 Base Indenture"), by and between the Company and U.S. Bank Trust Company, National Association, as successor in interest to U.S. Bank National Association ("U.S. Bank"), as Trustee, as supplemented in the case of the 2027 Euro Notes, by the Fourteenth Supplemental Indenture, dated as of March 10, 2021, by and between the Company, U.S. Bank, as Trustee, and Elavon Financial Services DAC, UK Branch, as Paying Agent, and the 2033 Euro Notes, by the Fifteenth Supplemental Indenture (together with the 2017 Base Indenture, the Fourteenth Supplemental Indenture and the Fifteenth Supplemental Indenture, the "Indentures"), dated as of March 10, 2021, by and between the Company, U.S. Bank, as Trustee, and Elavon Financial Services DAC, UK Branch, as Paying Agent, which are incorporated by reference as exhibits to the Form 10-K of which this Exhibit 4.43 is a part. As of December 31, 2022, €500,000,000 aggregate principal amount of the 2027 Euro Notes was outstanding and €600,000,000 aggregate principal amount of 2033 Euro Notes was outstanding.

You can find the definitions of certain terms used in this description under the subheading "Certain Definitions." Unless otherwise defined herein, capitalized terms used herein shall have the meanings given to them in the Indentures In this description, the references to "Equinix," "we," "us" or "our" refer only to Equinix, Inc. (and not to any of its affiliates, including Subsidiaries, as defined below).

The 2027 Euro Notes were initially issued in an aggregate principal amount of €500,000,000. The 2033 Euro Notes were initially issued in an aggregate principal amount of €600,000,000. The Notes are senior unsecured obligations and rank equally with our other unsecured and unsubordinated debt from time to time outstanding. The Notes were issued in minimum denominations of €100,000 and multiples of €1,000 thereafter.

The Notes are each traded on the Nasdaq Bond Exchange. We may, without the consent of the holders of the Notes, issue additional Notes having the same ranking, interest rate, maturity and other terms as the Notes previously issued. Any additional Notes having such similar terms, together with the Notes previously issued, will constitute a single series of Notes under the Indentures. Further, any additional Notes shall be issued under a separate CUSIP or ISIN number unless the additional Notes are issued pursuant to a "qualified reopening" of the original series, are otherwise treated as part of the same "issue" of debt instruments as the original series or are issued with no more than a de minimis amount of original issue discount, in each case for U.S. federal income tax purposes.

The 2027 Euro Notes will mature on March 15, 2027. Accrued and unpaid interest on the 2027 Euro Notes is payable in euro annually in arrears on March 15 of each year, which we refer to as the "interest payment date," beginning on March 15, 2022 to the persons in whose names the 2027 Euro Notes are registered at the close of business on the preceding March 1, which we refer to as the "record date." Interest on the 2027 Euro Notes has accrued from March 10, 2021.

The 2033 Euro Notes will mature on March 15, 2033. Accrued and unpaid interest on the 2033 Euro Notes is payable in euro annually in arrears on March 15 of each year, which we refer to as the "interest payment date," beginning on March 15, 2022 to the persons in whose names the 2033 Euro Notes are registered at the close of business on the preceding March 1, which we refer to as the "record date." Interest on the 2033 Euro Notes has accrued from March 10, 2021.

Interest on the Notes will be computed on the basis of the actual number of days in the period for which interest is being calculated and the actual number of days from and including the last date on which interest was paid on the Notes (or March 10, 2021, if no interest has been paid on the Notes), to but excluding the next scheduled interest payment date. This payment convention is referred to as ACTUAL/ACTUAL (ICMA) as defined in the rulebook of the International Capital Market Association.

Any payment required to be made on any day that is not a Business Day will be made on the next Business Day as if made on the date that the payment was due and no interest will accrue on that payment for the period from the original payment date to the date of that payment on the next Business Day.

We will pay principal, interest, premium, if any, and additional amounts, if any, on the Notes in euro and at the office or agency maintained for that purpose, which initially will be the office of the Paying Agent located at 125 Old Broad Street, Fifth Floor, London EC2N 1AR, United Kingdom. We will register the transfer of the Notes and exchange the Notes at our office or agency maintained for that purpose, which initially will be the Corporate Trust Office of the Trustee. We have initially appointed Elavon Financial Services DAC, UK Branch to act as Paying Agent and Elavon Financial Services DAC to act as Registrar in connection with the Notes. We may change the Paying Agent and registrar without prior notice to the Holders of the Notes, and we or any of our subsidiaries may act as Paying Agent and registrar. We may elect that payment of interest on Notes be made by wire transfer or by check mailed to the address of the appropriate person as it appears on the security register. So long as the registered owner of the Notes is a common depositary of Euroclear and Clearstream or their nominee, payment of principal and interest shall be made in accordance with the requirements of Euroclear and Clearstream. No service charge will be made for any transfer or exchange of Notes, but we may require payment of a sum sufficient to cover any transfer tax or similar governmental charge payable in connection with any such registration of transfer or exchange (but not for a redemption).

The Notes are our senior unsecured obligations and rank equally in right of payment with all our existing and future senior unsecured debt. The Notes are effectively junior to all of our existing and future secured indebtedness to the extent of the assets securing such indebtedness. Our subsidiaries are not guarantors of the Notes. Accordingly, the Notes are effectively subordinated to all of our existing and future indebtedness and other obligations (including trade payables) of our subsidiaries.

The Notes are not subject to a sinking fund.

Transfer and Exchange

A Holder may transfer or exchange Notes in accordance with the Indentures. The Registrar and the Trustee may require a Holder, among other things, to furnish appropriate endorsements and transfer documents and we may require a Holder to pay any taxes and fees required by law or permitted by the Indentures. We are not required to transfer or exchange any Note selected for redemption or tendered for repurchase, except for the unredeemed portion of any Note being redeemed in part that is equal to €100,000 or a multiple of €1,000 in excess thereof. Also, we are not required to issue, register the transfer of or exchange any Notes for a period of 15 days before a selection of Notes to be redeemed or during the period between a record date and the next succeeding interest payment date.

Optional Redemption

We may redeem at our election, at any time or from time to time, some or all of the Notes of any series before they mature. The redemption price will equal the sum of (1) an amount equal to one hundred percent (100%) of the principal amount of the Notes being redeemed plus accrued and unpaid interest up to, but not including, the redemption date (subject to the rights of Holders of record on the relevant record date to receive interest due on the relevant interest payment date) and (2) a make-whole premium. Notwithstanding the foregoing, if the 2027 Euro Notes are redeemed on or after January 15, 2027 (two (2) months prior to the maturity date of the 2027 Euro Notes) or the 2033 Euro Notes are redeemed on or after December 15, 2032 (three (3) months prior to the maturity date of the 2033 Euro Notes) (each such date with respect to the applicable series of Notes, the "First Par Call Date"), in each case, the redemption price will not include a make-whole premium for the applicable Notes.

We will calculate the make-whole premium with respect to any Notes redeemed before the applicable First Par Call Date, as the excess, if any, of:

(1) the aggregate present value as of the date of such redemption of each euro of principal being redeemed or paid and the amount of interest (exclusive of interest accrued to the date of redemption) that would have been payable in respect of such euro if such redemption had been made on the applicable First Par Call Date, in each case determined by discounting to the date of redemption on an annual basis (ACTUAL/ACTUAL (ICMA)) at the applicable Comparable Government Bond Rate (as defined below), plus 15 basis points in the case of the 2027 Euro Notes and 25 basis points in the case of the 2033 Euro Notes; over

(2) the principal amount of such note.

Neither the Trustee nor any paying agent shall have any obligation to calculate or verify the calculation of the make-whole premium.

Selection and Notice of Redemption

In the event that we choose to redeem less than all of an applicable series of the Notes, selection of the Notes for redemption will be made by the Trustee:

(1) by a method that complies with the requirements, as certified to the Trustee by us, of the principal securities exchange, if any, on which such Notes are listed at such time, and in compliance with the requirements of the relevant clearing system; provided that if such Notes are represented by one or more global notes, beneficial interests in such Notes will be selected for redemption by Euroclear and Clearstream in accordance with their respective standard procedures therefor; or

(2) if such Notes are not listed on a securities exchange, or such securities exchange prescribes no method of selection and such Notes are not held through a clearing system or the clearing system prescribes no method of selection, by lot.

No Notes of a principal amount of €100,000 or less shall be redeemed in part. We will also comply with any other requirements of the securities exchange, if any, on which the Notes are listed at such time. Notice of redemption will be mailed by first-class mail at least 15 but not more than 60 days before the redemption date to each Holder of Notes to be redeemed at its registered address (or, in the case of Notes represented by global notes, notice will be given in accordance with the applicable procedures of Euroclear or Clearstream) and the Trustee, provided that, if the redemption notice is issued in connection with a defeasance of the Notes or satisfaction and discharge of the applicable Indenture governing the Notes, the notice of redemption may be delivered more than 60 calendar days before the date of redemption. If any Note is to be redeemed in part only, then the notice of redemption that relates to such Note must state the portion of the principal amount thereof to be redeemed. A new note in a principal amount equal to the unredeemed portion thereof will be issued in the name of the Holder thereof upon cancellation of the original Note (or appropriate adjustments to the amount and beneficial interests in a global note will be made). On and after the redemption date, interest will cease to accrue on Notes or portions thereof called for redemption as long as we have deposited with the paying agent funds in satisfaction of the applicable redemption price. Any redemption or notice of redemption, other than a notice of redemption delivered pursuant to “Redemption Upon a Tax Event” (which must be irrevocable), may, at our discretion, be subject to one or more conditions precedent.

Repurchase of Notes Upon a Change of Control Triggering Event

Upon the occurrence of a Change of Control Triggering Event, unless we or a third party have previously or concurrently delivered a redemption notice with respect to all outstanding Notes as described under the subheadings “Redemption Upon a Tax Event” or “Optional Redemption,” we will be required to make an offer to purchase each Holder’s Notes pursuant to the offer described below (the “Change of Control Offer”), at a purchase price (the “Change of Control Payment”) equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, to the date of purchase.

Within 30 days following the date upon which the Change of Control Triggering Event occurred, we must send, or cause the Trustee to send, by first class mail (or, in the case of Notes represented by Global Notes, in accordance with the applicable procedures of Euroclear or Clearstream), a notice to each Holder, with a copy to the Trustee, which notice shall govern the terms of the Change of Control Offer. Such notice shall state, among other things, the purchase date, which must be no earlier than 15 days nor later than 60 days after the date such notice is delivered, other than as may be required by law (the "Change of Control Payment Date"). Holders electing to have a Note purchased pursuant to a Change of Control Offer will be required to surrender the Note, with the form entitled "Option of Holder to Elect Purchase" on the reverse of the Note completed and specifying the portion (equal to €100,000 and integral multiples of €1,000 in excess thereof) of such Holder's Notes that it agrees to sell to us pursuant to the Change of Control Offer, to the Paying Agent at the address specified in the notice prior to the close of business on the third Business Day prior to the Change of Control Payment Date.

If a Change of Control Offer is made, there can be no assurance that we will have available funds sufficient to pay the purchase price for all the Notes that might be delivered by Holders seeking to accept the Change of Control Offer. In the event we are required to purchase outstanding Notes pursuant to a Change of Control Offer, we expect that we would seek third-party financing to the extent we do not have available funds to meet our purchase obligations. However, there can be no assurance that we would be able to obtain such financing. In addition, there can be no assurance that we would be able to obtain the consents necessary to consummate a Change of Control Offer from the lenders under agreements governing outstanding Indebtedness that may in the future prohibit the Change of Control Offer. The failure to consummate a Change of Control Offer would constitute an Event of Default under the Indentures.

One of the events that constitutes a Change of Control under the Indentures is the disposition of "all or substantially all" of our assets. This term has not been interpreted under New York law, which is the governing law of the Indentures, to represent a specific quantitative test. As a consequence, if Holders of the Notes assert that we are required to make a Change of Control Offer and we elect to contest such assertion, there is uncertainty as to how a court interpreting New York law would interpret the term. Neither our Board of Directors nor the Trustee may waive the covenant of us to make a Change of Control Offer following a Change of Control Triggering Event. Restrictions in the Indentures described herein on the ability of us and our Subsidiaries to incur additional secured Indebtedness and to grant Liens on our property and the Restricted Subsidiaries may also make more difficult or discourage a takeover of us, whether favored or opposed by our management or stockholders. There can be no assurance that we or the acquiring party will have sufficient financial resources to effect a Change of Control Offer. Such restrictions may, in certain circumstances, make more difficult or discourage any leveraged buyout of us or any of our Subsidiaries by their respective management. However, the Indentures may not afford the Holders protection in all circumstances from the adverse aspects of a highly leveraged transaction, reorganization, amalgamation, restructuring, merger or similar transaction.

We will not be required to make a Change of Control Offer upon the occurrence of a Change of Control Triggering Event if a third party makes the Change of Control Offer in the manner, at the times and otherwise in compliance with the requirements set forth in the Indentures applicable to a Change of Control Offer made by us and purchases all Notes validly tendered and not withdrawn under such Change of Control Offer. We (or a third party) may make a Change of Control Offer in advance of, and conditioned upon, any Change of Control Triggering Event.

We will comply with the requirements of Rule 14e-1 under the Exchange Act and any other securities laws and regulations thereunder to the extent those laws and regulations are applicable in connection with the repurchase of the Notes as a result of a Change of Control Triggering Event. To the extent that the provisions of any securities laws or regulations conflict with the provisions of the "Change of Control" provisions of the Indentures, we will comply with the applicable securities laws and regulations and will not be deemed to have breached our obligations under the "Change of Control" provisions by virtue of such conflict.

Issuance in Euro

Initial holders will be required to pay for the Notes in euro, and all payments of interest and principal, including payments made upon any redemption of the Notes, will be payable in euro. If, on or after the date of this prospectus supplement, the euro is unavailable to us due to the imposition of exchange controls or other circumstances beyond our control or if the euro is no longer being used by the then member states of the European Monetary Union that have adopted the euro as their currency or for the settlement of transactions by public institutions of or within the international banking community, then all payments in respect of the Notes will be made in U.S. dollars until the euro is again available to us or so used. The amount payable on any date in euro will be converted into U.S. dollars on the basis of the then most recently available market exchange rate for euro. Any payment in respect of the Notes so made in U.S. dollars will not constitute an event of default under the Notes or the Indenture governing the Notes. Neither the Trustee nor the Paying Agent shall have any responsibility for any calculation or conversion in connection with the forgoing.

Investors will be subject to foreign exchange risks as to payments of principal and interest that may have important economic and tax consequences to them.

Payment of Additional Amounts

All payments made by us under or with respect to the Notes will be made free and clear of, and without withholding or deduction for or on account of, any Tax, unless the withholding or deduction of such Tax is then required by law. If any deduction or withholding by any applicable withholding agent for or on account of any Taxes imposed or levied by or on behalf of the United States or a taxing authority of or in the United States (a "Tax Jurisdiction") will at any time be required to be made in respect of any payments we make under or with respect to the Notes, including payments of principal, redemption price, purchase price, interest or premium, then we will pay such additional amounts (the "Additional Amounts") as may be necessary in order that the net amounts received in respect of such payments by each beneficial owner of the Notes that is not a U.S. Person (as defined below) after such withholding, deduction or imposition (including any such withholding, deduction or imposition in respect of any such Additional Amounts) will equal the respective amounts that would have been received in respect of such payments in the absence of such withholding or deduction; provided, however, that no Additional Amounts will be payable with respect to:

(1) any Taxes, to the extent such Taxes would not have been imposed but for the holder of a Note (or the beneficial owner for whose benefit such holder holds such Note) or a fiduciary, settlor, beneficiary, member or shareholder of the holder if the holder is an estate, trust, partnership or corporation, or a person holding a power over an estate or trust administered by a fiduciary holder, being considered as:

a. having a current or former connection with the relevant Tax Jurisdiction (other than a connection arising solely from the ownership or disposition of such Note, the enforcement of rights under such Note), including being or having been a citizen or resident of such Tax Jurisdiction, being or having engaged in a trade or business in such Tax Jurisdiction or having or having had a permanent establishment in such Tax Jurisdiction; or

b. being or having been a personal holding company, a passive foreign investment company or a controlled foreign corporation for U.S. federal income tax purposes or a corporation that has accumulated earnings to avoid U.S. federal income tax;

(2) any holder that is not the sole beneficial owner of the Notes, or a portion of the Notes, or that is a fiduciary, partnership or limited liability company, but only to the extent that a beneficial owner with respect to the holder, a beneficiary or settlor with respect to the fiduciary, or a beneficial owner or member of the partnership or limited liability company would not have been entitled to the payment of Additional Amounts had the beneficial owner, beneficiary, settlor or member received directly its beneficial or distributive share of the payment;

(3) any Taxes required to be withheld by any paying agent from any payment of principal of or interest on any Note, if such payment can be made without such withholding by at least one other paying agent;

(4) any Taxes, to the extent such Taxes were imposed as a result of the presentation of a Note for payment more than 30 days after the relevant payment is first made available for payment to the holder (except to the extent that the holder or beneficial owner would otherwise have been entitled to Additional Amounts had the Note been presented on the last day of such 30 day period);

(5) any Taxes that are payable otherwise than by deduction or withholding from a payment on or with respect to the Notes;

(6) any U.S. federal withholding tax imposed as a result of the beneficial owner:

a. being a controlled foreign corporation for U.S. federal income tax purposes related to us;

b. being or having been a "10-percent shareholder" of us as defined in Section 871(h)(3) of the Code; or

c. being a bank receiving payments on an extension of credit made pursuant to a loan agreement entered into in the ordinary course of its trade or business;

(7) any estate, inheritance, gift, sales, transfer, excise, wealth, capital gains, personal property or similar Taxes;

(8) any Taxes, to the extent such Taxes are imposed or withheld by reason of the failure of the holder or beneficial owner of Notes to comply with any certification, identification, information or other reporting requirements, whether required by statute, treaty, regulation or administrative practice of a Tax Jurisdiction, as a precondition to exemption from, or reduction in the rate of deduction or withholding of, Taxes imposed by the Tax Jurisdiction (including, without limitation, a certification that the holder or beneficial owner is not resident in the Tax Jurisdiction), but in each case, only to the extent the holder or beneficial owner is legally eligible to provide such certification or documentation;

(9) any Taxes that are imposed or withheld pursuant to Sections 1471 through 1474 of the Code as of the date of the applicable Indenture (or any amended or successor version that is substantively comparable), any regulations promulgated thereunder or any other official interpretations thereof, any agreement entered into pursuant to Section 1471(b) of the Code as of the date of applicable Indenture (or any amended or successor version described above) or any intergovernmental agreements (and any related law, regulation or official administrative guidance) implementing the foregoing; or

(10) any combination of items (1) through (9) above.

Except as specifically provided for in this subheading "Additional Amounts," we will not be required to make any payment for any Tax.

If we become aware that we will be obligated to pay Additional Amounts with respect to any payment under or with respect to the Notes, we will deliver to the Trustee and Paying Agent promptly prior to the date of that payment an Officers' Certificate stating the fact that Additional Amounts will be payable and the amount estimated to be so payable. The Officers' Certificate must also set forth any other information reasonably necessary to enable the Paying Agent to pay Additional Amounts to holders on the relevant payment date. The Trustee and Paying Agent shall be entitled to rely solely on such Officers' Certificate as conclusive proof that such payments are necessary.

If we are the applicable withholding agent, we will make all withholdings and deductions required by law and will remit the full amount deducted or withheld to the relevant Tax authority in accordance with applicable law. We will use reasonable efforts to obtain Tax receipts from each Tax authority evidencing the payment of any Taxes so deducted or withheld.

We will furnish to the Trustee upon reasonable written request, within a reasonable time after the date the payment of any Taxes so deducted or withheld is made, certified copies of Tax receipts evidencing payment by us, or if, notwithstanding such entity's efforts to obtain receipts, receipts are not obtained, other reasonable evidence of payments by such entity.

Whenever in the Indentures or in this "Description of Debt Securities" there is mentioned, in any context, the payment of amounts based upon the principal amount of the Notes or of principal, interest or of any other amount payable under, or with respect to, any of the Notes, such mention shall be deemed to include mention of the payment of Additional Amounts to the extent that, in such context, Additional Amounts are, were or would be payable in respect thereof.

The above obligations will survive any termination, defeasance or discharge of the Indentures, any transfer by a holder or beneficial owner of its Notes, and will apply, mutatis mutandis, to any successor Person to us.

As used under this subheading "Additional Amounts" and under the subheading "Redemption Upon a Tax Event," the term "United States" means the United States of America, any state thereof and the District of Columbia, and the term "U.S. Person" means any person that is, for U.S. federal income tax purposes, an individual who is a citizen or resident of the United States, a corporation, partnership or other entity created or organized in or under the laws of the United States, any state thereof or the District of Columbia or any estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

Redemption Upon a Tax Event

We may redeem the Notes, in whole but not in part, at our option, at any time upon giving not less than 30 nor more than 60 days' prior notice to the Holders of the Notes and the Trustee (which notice will be irrevocable) at a redemption price equal to 100% of the principal amount of the Notes being redeemed, plus accrued and unpaid interest, to, but excluding, the date of redemption (the "Tax Event Redemption Date") and all Additional Amounts (if any) then due and which will become due on the Tax Event Redemption Date as a result of the redemption or otherwise (subject to the right of Holders of the Notes on the relevant record date to receive interest due on the relevant Interest Payment Date occurring on or prior to the redemption date and Additional Amounts (if any) in respect thereof), if, on the next date on which any amount would be payable in respect of the Notes, we are or, based upon a Tax Opinion would be required to pay Additional Amounts in respect of the Notes and cannot avoid such payment obligation by taking reasonable measures available to us, and such requirement arises as a result of:

(1) any amendment to, or change in, the laws (or any regulations or rulings promulgated thereunder) of a relevant Tax Jurisdiction, which change or amendment is announced and becomes effective after the Issue Date; or

(2) any amendment to, or change in, an official written interpretation or application of such laws, regulations or rulings (including by virtue of a holding, judgment or order by a court of competent jurisdiction or a change in published administrative practice), which amendment or change is announced and becomes effective after the Issue Date.

We will not give any such notice of redemption earlier than 60 days prior to the earliest date on which we would be obligated to pay Additional Amounts if a payment in respect of the Notes was then due, and the obligation to pay Additional Amounts must be in effect at the time such notice is given. Before we publish or deliver a notice of redemption in respect of a Tax Event Redemption Date as described above, we will deliver to the Trustee an Officers' Certificate to the effect that we cannot avoid the obligation to pay Additional Amounts by taking reasonable measures available to it and, if required, the Tax Opinion. Any notice of redemption shall otherwise be given pursuant to the procedures pursuant to the procedures described under the subheading "Optional Redemption." The Trustee shall accept, and will be entitled to conclusively rely on, such Tax Opinion and such Officers' Certificate as sufficient evidence of the existence and satisfaction of the conditions precedent described in clause (1) or (2) above, as applicable, and upon delivery of such Tax Opinion and Officers' Certificate to the Trustee we will be entitled to give notice of redemption hereunder and such notice of redemption will be conclusive and binding on the Holders of the Notes.

Mandatory Redemption; Offers to Purchase; Open Market Purchases

We are not required to make any mandatory redemption or sinking fund payments with respect to the Notes. However, under certain circumstances, we may be required to offer to purchase Notes as described under "Change of Control Triggering Event." We may at any time and from time to time purchase Notes in the open market or otherwise (including pursuant to cash-settled swaps or derivatives), subject to compliance with applicable securities laws.

Holding Company Structure

We are a holding company for our Subsidiaries. Substantially all of our operations are conducted through our Subsidiaries and we derive substantially all its revenues from our Subsidiaries, and substantially all of its operating assets are owned by our Subsidiaries. Accordingly, we are dependent upon the distribution of the earnings of our Subsidiaries, whether in the form of dividends, advances or payments on account of intercompany obligations, to service its debt obligations. In addition, the claims of the Holders are subject to the prior payment of all liabilities (whether or not for borrowed money) and to any preferred stock interest of such Restricted Subsidiaries. There can be no assurance that, after providing for all prior claims, there would be sufficient assets available from us and our Subsidiaries to satisfy the claims of the Holders of Notes.

Certain Covenants

The Indentures contain, among others, the following covenants:

Limitation on Liens

We will not, and will not cause or permit any of our Restricted Subsidiaries to, directly or indirectly, create, incur, assume or permit or suffer to exist any Liens of any kind against or upon any of our property or assets or any of our Restricted Subsidiaries whether owned on the Issue Date or acquired after the Issue Date, or any proceeds therefrom, or assign or otherwise convey any right to receive income or profits therefrom unless:

(1) in the case of Liens securing Subordinated Indebtedness, the Notes are secured by a Lien on such property, assets or proceeds that is senior in priority to such Liens; and

(2) in all other cases, the Notes are equally and ratably secured, except for:

a. Liens existing as of the Issue Date to the extent and in the manner such Liens are in effect on the Issue Date;

b. Liens securing our and our Restricted Subsidiaries' Obligations under any hedge facility permitted under the Indentures to be entered into by us and our Restricted Subsidiaries;

c. Liens securing the Notes;

d. Liens in favor of us or a Wholly Owned Restricted Subsidiary of ours on assets of any of our Restricted Subsidiary of ours; and

e. Permitted Liens.

With respect to any Lien securing Indebtedness that was permitted to secure such Indebtedness at the time of the incurrence of such Indebtedness, such Lien shall also be permitted to secure any Increased Amount of such Indebtedness. The "Increased Amount" of any Indebtedness shall mean any increase in the amount of such Indebtedness in connection with any accrual of interest, whether payable in cash or in kind, accretion or amortization of original issue discount, imputed interest, the payment of interest in the form of additional Indebtedness with the same terms or the payment of dividends on Disqualified Capital Stock in the form of additional shares of the same class, and increases in the amount of Indebtedness outstanding solely as a result of fluctuations in the exchange rate of currencies or increases in the value of property securing Indebtedness.

Limitation on Sale and Leaseback Transactions

We will not, and will not permit any Restricted Subsidiary to, enter into any Sale and Leaseback Transaction with respect to any property or assets unless:

(1) the Sale and Leaseback Transaction is solely with us or a Restricted Subsidiary;

(2) the lease is for a period not in excess of 36 months (or which may be terminated by us or any of our Subsidiaries within a period of not more than 36 months);

(3) we would be able to incur Indebtedness secured by a Lien with respect to such Sale and Leaseback Transaction without equally and ratably securing the Notes pursuant to the second enumerated item under the "Limitation on Liens" subheading described above (other than in reliance on clause (20) of the definition therein of "Permitted Liens"); or

(4) we or such Restricted Subsidiary within 365 days after the sale of such property in connection with such Sale and Leaseback Transaction is completed, apply an amount equal to the net proceeds of the sale of such property to (i) the redemption of Notes, other Indebtedness of ours ranking on a parity with the Notes in right of payment or Indebtedness of ours or a Restricted Subsidiary or (ii) the purchase of other property; provided that, in lieu of applying such amount to the retirement of Pari Passu Indebtedness, we may deliver Notes to the Trustee for cancellation; such Notes to be credited at the cost thereof to us.

Consolidation, Merger and Sale of Assets

We will not, in a single transaction or series of related transactions, consolidate or merge with or into any Person, or sell, assign, transfer, lease, convey or otherwise dispose of (or cause or permit any Restricted Subsidiary to sell, assign, transfer, lease, convey or otherwise dispose of) all or substantially all of our assets (determined on a consolidated basis for us and our Restricted Subsidiaries) whether as an entirety or substantially as an entirety to any Person, unless:

(1) either:

a. we shall be the surviving or continuing corporation; or

b. the Person (if other than us) formed by such consolidation or into which we are merged or the Person which acquires by sale, assignment, transfer, lease, conveyance or other disposition our properties and assets and of our Restricted Subsidiaries substantially as an entirety (the "Surviving Entity"):

i. shall be an entity organized and validly existing under the laws of the United States or any State thereof or the District of Columbia; provided that in the case where the Surviving Entity is not a corporation, a co-obligor of the Notes is a corporation; and

ii. shall expressly assume, by supplemental indenture (in form satisfactory to the Trustee), executed and delivered to the Trustee, the due and punctual payment of the principal of, and premium, if any, interest on all of the Notes and the performance of every covenant of the Notes and the Indentures on our part to be performed or observed;

(2) immediately before and immediately after giving effect to such transaction and the assumption contemplated by clause (1)b.ii. above, no Default or Event of Default shall have occurred or be continuing; and

(3) we or the Surviving Entity shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that such consolidation, merger, sale, assignment, transfer, lease, conveyance or other disposition and, if a supplemental indenture is required in connection with such transaction, such supplemental indenture complies with the applicable provisions of the applicable Indenture and that all conditions precedent in the applicable Indenture relating to such transaction have been satisfied.

For purposes of the foregoing, the transfer (by lease, assignment, sale or otherwise, in a single transaction or series of transactions) of all or substantially all of the properties or assets of one or more of our Restricted Subsidiaries in a single or a series of related transactions, which properties and assets, if held by us instead of such Restricted Subsidiaries, would constitute all or substantially all of our properties and assets on a consolidated basis, shall be deemed to be the transfer of all or substantially all of the properties and assets.

Notwithstanding clauses (1) and (2) above, but subject to the proviso in clause (1)b.i. above, we may merge with (x) any of our Wholly Owned Restricted Subsidiaries or (y) an Affiliate that is a Person with no material assets or liabilities and which was organized solely for the purpose of reorganizing us in another jurisdiction.

For the avoidance of doubt, nothing in this section shall prevent us or a Restricted Subsidiary from consummating a Company Conversion.

The Indentures provide that upon any consolidation, combination or merger or any transfer of all or substantially all of our assets in accordance with the foregoing in which we are not the continuing corporation, the successor Person formed by such consolidation or into which we are merged or to which such conveyance, lease or transfer is made shall succeed to, and be substituted for, and may exercise every right and power of, us under the Indentures and the Notes with the same effect as if such Surviving Entity had been named as such and all financial information and reports required by the Indentures shall be provided by and for such Surviving Entity.

Reports to Holders

Whether or not we are subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, we must provide the Trustee and, upon request, to any Holder of the Notes within 15 business days after filing, or in the event no such filing is required, within 15 business days after the end of the time periods specified in those sections with:

(1) all quarterly and annual financial information that would be required to be contained in a filing with the SEC on Forms 10-Q and 10-K if we were required to file such forms, including a "Management's Discussion and Analysis of Financial Condition and Results of Operations" and, with respect to the annual financial statements only, a report thereon by our certified independent accountants, and

(2) all current reports that would be required to be filed with the SEC on Form 8-K if we were required to file such reports;

provided that the foregoing delivery requirements shall be deemed satisfied if the foregoing materials are available on the SEC's EDGAR system or on our website within the applicable time period.

In addition, whether or not required by the SEC, we will, if the SEC will accept the filing, file a copy of all of the information and reports referred to in clauses (1) and (2) with the SEC for public availability within the time periods specified in the SEC's rules and regulations. In addition, we will make the information and reports available to securities analysts and prospective investors upon request. If we had any Unrestricted Subsidiaries during the relevant period, we will also provide to the Trustee and, upon request, to any Holder of the Notes, information sufficient to ascertain the financial condition and results of operations of us and our Restricted Subsidiaries, excluding in all respects the Unrestricted Subsidiaries.

Notwithstanding anything to the contrary herein, we will not be deemed to have failed to comply with any of its obligations hereunder for purposes of clause (3) under the heading “Events of Default” until 90 days after the date any report hereunder is due to be delivered to the Trustee.

Compliance Certificate

For as long as any debt securities of a series are outstanding, we must deliver to the Trustee, within 90 days after the end of each fiscal year, an Officers’ Certificate stating that a review of our and our subsidiaries’ activities during the preceding fiscal year has been made under the supervision of the signing Officer with a view to determining whether each has kept, observed, performed and fulfilled its obligations under the 2017 Base Indenture. The signing Officer must certify that the best of his or her knowledge, each entity has kept, observed, performed and fulfilled each and every covenant contained in the 2017 Base Indenture and is not in default in the performance or observance of any of its terms, provisions and conditions (or, if a Default or Event of Default has occurred, describe all such Defaults or Events of Default of which he or she may have knowledge and what action we are taking or proposes to take with respect thereto).

Trustee

The Indentures provide that, except during the continuance of an Event of Default, the Trustee will perform only such duties as are specifically set forth in the Indentures. During the existence of an Event of Default, the Trustee will exercise such rights and powers vested in it by the Indentures, and use the same degree of care and skill in its exercise as a prudent person would exercise or use under the circumstances in the conduct of his own affairs.

The Indentures and the provisions of the Trust Indenture Act contain certain limitations on the rights of the Trustee, should it become a creditor of ours, to obtain payments of claims in certain cases or to realize on certain property received in respect of any such claim as security or otherwise. Subject to the Trust Indenture Act, the Trustee will be permitted to engage in other transactions; provided that if the Trustee acquires any conflicting interest as described in the Trust Indenture Act, it must eliminate such conflict or resign. U.S. Bancorp Investments, Inc., one of the underwriters in the offering of the Notes, is an affiliate of the Trustee.

Book-Entry; Delivery and Form

The Notes will be issued in the form of one or more Global Notes, deposited with, or on behalf of, the Depositary, as common depositary for Euroclear and Clearstream, and registered in the name of the Depositary or its nominee for the accounts of Euroclear and Clearstream, duly executed by us and authenticated by the Trustee. We will not issue certificated securities to you for the Notes you purchase, except in the limited circumstances described below.

Beneficial interests in the global securities will be represented, and transfers of such beneficial interest will be effected, through accounts of financial institutions acting on behalf of beneficial owners as direct or indirect participants in Clearstream or Euroclear. Investors may hold beneficial interests in Notes directly through Clearstream or Euroclear, if they are participants in such systems, or indirectly through organizations that are participants in such systems. The address of Clearstream is 42 Avenue JF Kennedy, L-1855 Luxembourg, Luxembourg, and the address of Euroclear is 1 Boulevard du Roi Albert II, 1210 Brussels, Belgium.

Beneficial interests in the global securities will be shown on, and transfers of beneficial interests in the global securities will be made only through, records maintained by Clearstream or Euroclear and their participants. When you purchase Notes through the Clearstream or Euroclear systems, the purchases must be made by or through a direct or indirect participant in the Clearstream or Euroclear system, as the case may be. The participant will receive credit for the Notes that you purchase on Clearstream’s or Euroclear’s records, and, upon its receipt of such credit, you will become the beneficial owner of those Notes. Your ownership interest will be recorded only on the records of the direct or indirect participant in Clearstream or Euroclear, as the case may be, through which you purchase the Notes and not on Clearstream’s or

Euroclear's records. Neither Clearstream nor Euroclear, as the case may be, will have any knowledge of your beneficial ownership of the Notes. Clearstream's or Euroclear's records will show only the identity of the direct participants and the amount of the Notes held by or through those direct participants. You will not receive a written confirmation of your purchase or sale or any periodic account statement directly from Clearstream or Euroclear. You should instead receive those documents from the direct or indirect participant in Clearstream or Euroclear through which you purchase the Notes. As a result, the direct or indirect participants are responsible for keeping accurate account of the holdings of their customers. The Paying Agent will wire payments on the Notes to the Depositary as the holder of the global securities. The Trustee, the Paying Agent and we will treat the Depositary or any successor nominee to the Depositary as the owner of the global securities for all purposes. Accordingly, the Trustee, the Paying Agent and we will have no direct responsibility or liability to pay amounts due with respect to the global securities to you or any other beneficial owners in the global securities. Any redemption or other notices with respect to the Notes will be sent by us directly to Clearstream or Euroclear, which will, in turn, inform the direct participants (or the indirect participants), which will then contact you as a beneficial holder, all in accordance with the rules of Clearstream or Euroclear, as the case may be, and the internal procedures of the direct participant (or the indirect participant) through which you hold your beneficial interest in the Notes. Euroclear and Clearstream will credit payments to the cash accounts of Euroclear participants or Clearstream customers in accordance with the relevant system's rules and procedures, to the extent received by its depositary. Euroclear and Clearstream have established their procedures in order to facilitate transfers of the Notes among participants of Euroclear and Clearstream. However, they are under no obligation to perform or continue to perform those procedures, and they may discontinue or change those procedures at any time. The registered holder of the Notes will be The Bank of New York Depository (Nominees) Limited, as nominee of the Depositary.

Same Day Settlement and Payment

The underwriters will make settlement for the Notes in immediately available funds. We will make all payments of principal and interest in respect of the Notes in immediately available funds. It is intended that Notes will be credited to the securities custody accounts of Clearstream and Euroclear holders on the settlement date on a delivery against payment basis. None of the Notes may be held through, no trades of the Notes will be settled through, and no payments with respect to the Notes will be made through, The Depository Trust Company in the United States of America. We expect that secondary trading in certificated securities, if any, will also be settled in immediately available funds. No assurance can be given as to the effect, if any, of settlement in immediately available funds on trading activity in the Notes.

Events of Default

In the Indentures, the term "Event of Default" with respect to debt securities of any series (including the Notes) means any of the following:

(1) the failure to pay interest on any Notes when the same becomes due and payable and the default continues for a period of 30 days;

(2) the failure to pay the principal on any Notes of the applicable series, when such principal becomes due and payable, at maturity, upon redemption or otherwise (including the failure to make a payment to purchase Notes tendered pursuant to a Change of Control Offer) on the date specified for such payment in the applicable offer to purchase;

(3) a default in the observance or performance of any other covenant or agreement contained in the applicable Indenture which default continues for a period of 60 days after we receive written notice specifying the default (and demanding that such default be remedied) from the Trustee or the Holders of at least 25% of the outstanding principal amount of the Notes of the applicable series (except in the case of a default with respect to the "Consolidation, merger and sale of assets" covenant, which will constitute an Event of Default with such notice requirement but without such passage of time requirement);

(4) the failure to pay at final maturity (giving effect to any applicable grace periods and any extensions thereof) the stated principal amount of any Indebtedness of us or any of our Restricted Subsidiary, or the acceleration of the final stated maturity of any such Indebtedness (which acceleration is not rescinded, annulled or otherwise cured within 30 days of receipt by us or such Restricted Subsidiary of notice of any such acceleration) if the aggregate principal amount of such Indebtedness, together with the principal amount of any other such Indebtedness in default for failure to pay principal at final stated maturity or which has been so accelerated (in each case with respect to which the 30-day period described above has passed), equals $500.0 million or more at any time; or

(5) certain events of bankruptcy affecting us or any of our Material Subsidiaries.

If an Event of Default (other than an Event of Default specified in clause (5) above with respect to us) shall occur and be continuing with respect to a series of Notes, the Trustee or the Holders of at least 25% in principal amount of outstanding Notes of such series may declare the principal of and accrued interest on all the Notes of such series to be due and payable by notice in writing to us and the Trustee specifying the respective Event of Default and that it is a "notice of acceleration," and the same shall become immediately due and payable.

If an Event of Default specified in clause (5) above with respect to us occurs and is continuing with respect to a series of Notes, then all unpaid principal of, and premium, if any, and accrued and unpaid interest on all of the outstanding Notes of such series shall ipso facto become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Holder.

The Holders of a majority in principal amount of an applicable series of Notes may waive any existing Default or Event of Default under the applicable Indenture, and its consequences, except a default in the payment of the principal of or interest on any Notes of such series.

The Indentures provide that, at any time after a declaration of acceleration with respect to an applicable series of Notes as described in the preceding paragraphs, the Holders of a majority in principal amount of such Notes may rescind and cancel such declaration and its consequences:

(1) if the rescission would not conflict with any judgment or decree;

(2) if all existing Events of Default have been cured or waived except nonpayment of principal or interest that has become due solely because of the acceleration;

(3) to the extent the payment of such interest is lawful, interest on overdue installments of interest and overdue principal, which has become due otherwise than by such declaration of acceleration, has been paid;

(4) if we have paid the Trustee its reasonable compensation and reimbursed the Trustee for its expenses, disbursements and advances; and

(5) in the event of the cure or waiver of an Event of Default of the type described in clause (5) of the description above of Events of Default, the Trustee shall have received an officers' certificate and an opinion of counsel that such Event of Default has been cured or waived. No such rescission shall affect any subsequent Default or impair any right consequent thereto.

The Holders of a majority in principal amount of an applicable series of Notes may waive any existing Default or Event of Default under the applicable Indenture, and its consequences, except a default in the payment of the principal of or interest on any Notes of such series.

Holders of a series of Notes may not enforce the applicable Indenture or the Notes except as provided in the applicable Indenture and under the Trust Indenture Act. Subject to the provisions of the Indentures relating to the duties of the Trustee, the Trustee is under no obligation to exercise any of its rights or powers under the Indentures at the request, order or direction of any of the Holders, unless such Holders have offered to the Trustee indemnity satisfactory to the Trustee. Subject to all provisions of the applicable Indenture and applicable law, the Holders of a majority in aggregate principal amount of a then outstanding series of

Notes have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee.

Under the Indentures, we are required to provide an officers' certificate to the Trustee promptly upon any such officer obtaining knowledge of any Default or Event of Default (provided that such officers shall provide such certification at least annually whether or not they know of any Default or Event of Default) that has occurred and, if applicable, describe such Default or Event of Default and the status thereof.

Modification and Waiver

Except as provided in the next two succeeding paragraphs, we and the Trustee with the consent of the holders of at least a majority in aggregate principal amount of the Notes of an applicable series then outstanding (including consents obtained in connection with a tender offer or exchange offer for such Notes) may amend the applicable Indenture or the Notes of such series and the holders of at least a majority in aggregate principal amount of the Notes of an applicable series outstanding may waive any past default or compliance with any provisions of the applicable Indenture or the Notes of such series.

The Indentures and the Notes may be amended by us and the Trustee without the consent of any holder of the Notes to:

(1) cure any ambiguity, defect or inconsistency;

(2) provide for the assumption by a Surviving Entity of our obligations under the Indentures;

(3) provide for uncertificated notes in addition to or in place of certificated notes;

(4) secure the Notes, add to our covenants for the benefit of the holders of the Notes or surrender any right or power conferred upon us;

(5) make any change that does not adversely affect the rights of any holder of the Notes;

(6) comply with any requirement of the SEC in connection with the qualification of the Indentures under the Trust Indenture Act;

(7) provide for the issuance of Additional Notes in accordance with the Indentures;

(8) evidence and provide for the acceptance of appointment by a successor Trustee;

(9) conform the text of the Indentures or the Notes to any provision of this "Description of Notes" to the extent that such provision in this "Description of Notes" was intended to be a recitation of a provision of the Indentures or the Notes; or

(10) make any amendment to the provisions of the Indentures relating to the transfer and legending of the Notes as permitted by the Indentures, including, without limitation to facilitate the issuance and administration of the Notes; provided that (i) compliance with the Indentures as so amended would not result in the Notes being transferred in violation of the Securities Act or any applicable securities law and (ii) such amendment does not materially and adversely affect the rights of holders to transfer the Notes.

The consent of the holders of the Notes is not necessary to approve the particular form of any proposed amendment. It is sufficient if such consent approves the substance of the proposed amendment.

Without the consent of each holder of an outstanding Note of an applicable series, no amendment or waiver may:

(1) reduce the amount of Notes of such series whose holders must consent to an amendment;

(2) reduce the rate of or change or have the effect of changing the time for payment of interest, including defaulted interest, on any Notes of such series;

(3) reduce the principal of or change or have the effect of changing the fixed maturity of any Notes of such series, or reduce the redemption price for any Notes of such series or change the date on which any Notes of such series may be subject to redemption at par, other than prior to our obligation to purchase Notes of such series under provisions relating to our obligation to make and consummate a Change of Control Offer in the event of a Change of Control Triggering Event;

(4) make any Notes of such series payable in money other than that stated in such Notes;

(5) make any change in provisions of the applicable Indenture protecting the contractual right of each holder to receive payment of principal of and interest on such Note on or after the due date thereof or to bring suit to enforce such payment (except a rescission of acceleration of the Notes by the holders of at least a majority in aggregate principal amount of the Notes of the applicable series and a waiver of the payment default that resulted from such acceleration), or permitting holders of a majority in principal amount of such Notes to waive Defaults or Events of Default;

(6) after our obligation to purchase Notes arises thereunder, amend, change or modify in any material respect our obligation to make and consummate a Change of Control Offer in the event of a Change of Control Triggering Event or, after such Change of Control Triggering Event has occurred, modify any of the provisions or definitions with respect thereto;

(7) modify or change any provision of the applicable Indenture or the related definitions affecting the ranking of the Notes of such series in a manner which adversely affects the holders; or

(8) modify or change the amendment provisions of the Notes of such series or the applicable Indenture.

No Personal Liability of Directors, Officers, Employees and Stockholders

No past, present or future director, officer, employee, incorporator, agent, stockholder or Affiliate of ours, as such, shall have any liability for any of our obligations under the Notes or under the Indentures or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each Holder of Notes by accepting a note waives and releases all such liabilities. The waiver and release are part of the consideration for the issuance of the Notes. Such waiver may not be effective to waive liabilities under federal securities law, and it is the view of the SEC that such a waiver is against public policy.

Defeasance

We may, at our option and at any time, elect to have our obligations discharged with respect to the outstanding Notes of an applicable series (“Legal Defeasance”). Such Legal Defeasance means that we shall be deemed to have paid and discharged the entire Indebtedness represented by the applicable outstanding Notes, except for:

(1) the rights of Holders to receive payments in respect of the principal of, premium, if any, and interest on the applicable Notes when such payments are due;

(2) our obligations with respect to the applicable Notes concerning issuing temporary notes, registration of Notes, mutilated, destroyed, lost or stolen notes and the maintenance of an office or agency for payments;

(3) the rights, powers, trust, duties and immunities of the Trustee and our obligations in connection therewith; and

(4) the Legal Defeasance provisions of the applicable Indenture.

In addition, we may, at our option and at any time, elect to have our obligations released with respect to certain covenants that are described in an indenture (“Covenant Defeasance”) and thereafter any omission to comply with such obligations shall not constitute a Default or Event of Default with respect to the Notes of the applicable series. In the event Covenant Defeasance occurs, certain events (not including non-payment, bankruptcy, receivership, reorganization and insolvency events) will no longer constitute an Event of Default with respect to the applicable Notes.

In order to exercise either Legal Defeasance or Covenant Defeasance:

(1) we must irrevocably deposit with the Trustee (or with a custodian or account bank appointed on behalf of the Trustee), for the benefit of the Holders, cash in euro (or U.S. dollars as described under the subheading "Issuance in Euro"), non-callable European Government Obligations, rated AAA or better by S&P and Aaa by Moody's, or a combination thereof, in such amounts as will be sufficient, in the opinion of a nationally recognized firm of independent public accountants, to pay the principal of, premium, if any, and interest on the applicable Notes on the stated date for payment thereof or on the applicable redemption date, as the case may be;

(2) in the case of Legal Defeasance, we shall have delivered to the Trustee an opinion of counsel in the United States reasonably acceptable to the Trustee confirming that:

a. we have received from, or there has been published by, the Internal Revenue Service a ruling; or

b. since the date of the applicable Indenture, there has been a change in the applicable federal income tax law,

in either case to the effect that, and based thereon such opinion of counsel shall confirm that, beneficial owners of the applicable series of Notes will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such Legal Defeasance and will be subject to U.S. federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Legal Defeasance had not occurred;

(3) in the case of Covenant Defeasance, we shall have delivered to the Trustee an opinion of counsel in the United States reasonably acceptable to the Trustee confirming that beneficial owners of the Notes will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such Covenant Defeasance and will be subject to U.S. federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such Covenant Defeasance had not occurred;

(4) no Default or Event of Default shall have occurred and be continuing on the date of such deposit (other than a Default or an Event of Default resulting from the borrowing of funds to be applied to such deposit and the grant of any Lien securing such borrowings);

(5) such Legal Defeasance or Covenant Defeasance shall not result in a breach or violation of, or constitute a default under the applicable Indenture (other than a Default or an Event of Default resulting from the borrowing of funds to be applied to such deposit and the grant of any Lien securing such borrowings) or any other material agreement or instrument to which we or any of our Restricted Subsidiaries is a party or by which we or any of our Restricted Subsidiaries is bound;

(6) we shall have delivered to the Trustee an officers' certificate stating that the deposit was not made by us with the intent of preferring the Holders over any other creditors of ours or with the intent of defeating, hindering, delaying or defrauding any other creditors of ours or others;

(7) we shall have delivered to the Trustee an officers' certificate and an opinion of counsel, which opinion may be subject to customary assumptions and exclusions, each stating that all conditions precedent provided for or relating to the Legal Defeasance or the Covenant Defeasance have been complied with;

(8) we shall have delivered to the Trustee an opinion of counsel to the effect that assuming no intervening bankruptcy of ours between the date of deposit and the 124th day following the date of deposit and that no Holder is an insider of ours, after the 124th day following the date of deposit, the trust funds

will not be subject to the effect of any applicable bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally; and

(9) certain other customary conditions precedent are satisfied.

Notwithstanding the foregoing, the opinion of counsel required by clause 2 above with respect to a Legal Defeasance need not be delivered if all Notes of the applicable series not theretofore delivered to the Trustee for cancellation (1) have become due and payable or (2) will become due and payable on the maturity date or a redemption date within one year under arrangements reasonably satisfactory to the Trustee for the giving of notice of redemption by the Trustee in the name, and at the expense, of us.

Satisfaction and Discharge

An Indenture will be discharged and will cease to be of further effect (except as to surviving rights or registration of transfer or exchange of the Notes of the applicable series, as expressly provided for in such Indenture) as to all outstanding Notes of such series when:

a. either (a) all the applicable Notes theretofore authenticated and delivered (except lost, stolen or destroyed notes which have been replaced or paid and Notes for whose payment money has theretofore been deposited in trust or segregated and held in trust by us and thereafter repaid to us or discharged from such trust) have been delivered to the Trustee for cancellation or (b) all applicable Notes not theretofore delivered to the Trustee for cancellation (1) have become due and payable or (2) will become due and payable within one year, or are to be called for redemption within one year, under arrangements reasonably satisfactory to the Trustee for the giving of notice of redemption by the Trustee in the name, and at the expense, of us, and we have irrevocably deposited or caused to be deposited with the Trustee (or with a custodian or account bank appointed on behalf of the Trustee), funds in an amount in cash in euro (or U.S. dollars as described under the subheading "Issuance in Euro"), non-callable European Government Obligations, rated AAA or better by S&P and Aaa by Moody's, or a combination thereof, sufficient to pay and discharge the entire Indebtedness on the applicable Notes not theretofore delivered to the Trustee for cancellation, for principal of, premium, if any, and interest on the applicable Notes to the date of maturity or redemption, as the case may be, together with irrevocable instructions from us directing the Trustee to apply such funds to the payment thereof at maturity or redemption, as the case may be;

b. we have paid all other sums payable under such Indenture by us with respect to the applicable Notes; and

c. we have delivered to the Trustee an officers' certificate and an opinion of counsel, which opinion may be subject to customary assumptions and exclusions, stating that all conditions precedent under such Indenture relating to the satisfaction and discharge of such Indenture have been complied with.

Governing Law

The Indentures provide that they and the Notes are governed by, and construed in accordance with, the laws of the State of New York but without giving effect to applicable principles of conflicts of law to the extent that the application of the law of another jurisdiction would be required thereby.

Certain Definitions

Set forth below is a summary of certain of the defined terms used in the Indentures. Reference is made to the Indentures for the full definition of all such terms, as well as any other terms used herein for which no definition is provided.

"*Acquired Indebtedness*" means Indebtedness of a Person or any of its Subsidiaries existing at the time such Person becomes a Restricted Subsidiary of ours or at the time it merges or consolidates with or into us or any of our Subsidiaries or that is assumed in connection with the acquisition of assets from such Person, in each case whether or not incurred by such Person in connection with, or in anticipation or contemplation of, such Person becoming a Restricted Subsidiary of ours or such acquisition, merger or consolidation.

"*Affiliate*" means, with respect to any specified Person, any other Person who directly or indirectly through one or more intermediaries controls, or is controlled by, or is under common control with, such specified Person. The term "control" means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise; and the terms "controlling" and "controlled" have meanings correlative of the foregoing.

"*Asset Acquisition*" means (1) an investment by us or any Restricted Subsidiary of ours in any other Person pursuant to which such Person shall become a Restricted Subsidiary of ours or any Restricted Subsidiary of ours, or shall be merged with or into us or any Restricted Subsidiary of ours, or (2) the acquisition by us or any Restricted Subsidiary of ours of the assets of any Person (other than a Restricted Subsidiary of ours) that constitute all or substantially all of the assets of such Person or comprises any division or line of business of such Person or any other properties or assets of such Person other than in the ordinary course of business.

"*Attributable Debt*" means, in respect of a Sale and Leaseback Transaction, the present value, discounted at the interest rate implicit in the Sale and Leaseback Transaction, of the total obligations of the lessee for rental payments during the remaining term of the lease in the Sale and Leaseback Transaction.

"*Board of Directors*" means, as to any Person, the board of directors (or similar governing body) of such Person or any duly authorized committee thereof.

"*Board Resolution*" means, with respect to any Person, a copy of a resolution certified by the Secretary or an Assistant Secretary of such Person to have been duly adopted by the Board of Directors of such Person and to be in full force and effect on the date of such certification, and delivered to the Trustee.

"*Business Day*" means any day, other than a Saturday or Sunday, (1) which is not a day on which banking institutions in The City of New York or The City of London are authorized or required by law, regulation or executive order to close and (2) on which the Trans-European Automated Real-time Gross Settlement Express Transfer system (the TARGET2 system), or any successor thereto, operates.

"*Capital Stock*" means:

(1) with respect to any Person that is a corporation, any and all shares, interests, participations or other equivalents (however designated and whether or not voting) of corporate stock, including each class of Common Stock and Preferred Stock of such Person, and all options, warrants or other rights to purchase or acquire any of the foregoing; and

(2) with respect to any Person that is not a corporation, any and all partnership, membership or other equity interests of such Person, and all options, warrants or other rights to purchase or acquire any of the foregoing.

"*Cash Equivalents*" means:

(1) debt securities denominated in euro, pounds sterling or U.S. dollars to be issued or directly and fully guaranteed or insured by the government of a Participating Member State, the U.K. or the U.S., as applicable, where the debt securities have not more than twelve months to final maturity and are not convertible into any other form of security;

(2) commercial paper denominated in euro, pounds sterling or U.S. dollars maturing no more than one year from the date of creation thereof and, at the time of acquisition, having a rating of at least P1 from Moody's and A1 from S&P;

(3) certificates of deposit denominated in euro, pounds sterling or U.S. dollars having not more than twelve months to maturity issued by a bank or financial institution incorporated or having a branch in a Participating Member State in the United Kingdom or the United States, provided that the bank is rated P1 by Moody's or A1 by S&P;

(4) any cash deposit denominated in euro, pounds sterling or U.S. dollars with any commercial bank or other financial institution, in each case whose long term unsecured, unsubordinated debt rating is at least A3 by Moody's or A-by S&P;

(5) repurchase obligations with a term of not more than seven days for underlying securities of the types described in clause (1) above entered into with any bank or financial institution meeting the qualifications specified in clause (4) above; and

(6) investments in money market funds which invest substantially all their assets in securities of the types described in clauses (1) through (5) above.

"*Change of Control*" means the occurrence of one or more of the following events:

(1) any sale, lease, exchange or other transfer (in one transaction or a series of related transactions) of all or substantially all of our assets to any Person or group of related Persons for purposes of Section 13(d) of the Exchange Act (a "Group"), together with any Affiliates thereof (whether or not otherwise in compliance with the provisions of the Indentures);

(2) the approval by the holders of our Capital Stock of any plan or proposal for the liquidation or dissolution of us (whether or not otherwise in compliance with the provisions of the Indentures); or

(3) any Person or Group shall become the owner, directly or indirectly, beneficially or of record, of shares representing more than 50% of the aggregate ordinary voting power represented by our issued and outstanding Capital Stock.

For the avoidance of doubt, the consummation of the Company Conversion shall not constitute a "*Change of Control*."

"*Change of Control Triggering Event*" means, in each case, the occurrence of both (i) a Change of Control and (ii) a Rating Event.

"*Clearstream*" means Clearstream Banking, a société anonyme as currently in effect or any successor securities clearing agency.

"*Code*" means the Internal Revenue Code of 1986, as amended.

"*Common Stock*" of any Person means any and all shares, interests or other participations in, and other equivalents (however designated and whether voting or non-voting) of such Person's common stock, whether outstanding on the Issue Date or issued after the Issue Date, and includes, without limitation, all series and classes of such common stock.

"*Company Conversion*" means the actions taken by us and our Subsidiaries in connection with our qualification as a REIT, including without limitation, (y) separating from time to time all or a portion of our United States and international businesses into, as defined by the Code, taxable REIT subsidiaries ("*TRS*") and/or qualified REIT subsidiaries ("QRS") (it being understood that any such TRS and/or QRS shall remain Restricted Subsidiaries, as applicable, as prior to the Company Conversion) and (z) amending its charter to impose ownership limitations on our Capital Stock directly or indirectly by merging into a Wholly Owned Restricted Subsidiary of ours.

"*Comparable Government Bond*" means, in relation to any Comparable Government Bond Rate calculation, at the discretion of an independent investment bank selected by us, a German government bond whose maturity is closest to the applicable First Par Call Date of the Notes being redeemed, or if such independent investment bank in its discretion determines that such similar bond is not in issue, such other German government bond as such independent investment bank may, with the advice of three brokers of, and/or market makers in, German government bonds selected by us, determine to be appropriate for determining the Comparable Government Bond Rate.

"*Comparable Government Bond Rate*" means the price, expressed as a percentage (rounded to three decimal places, with 0.0005 being rounded upwards), at which the gross redemption yield on the Notes, if they were to be purchased at such price on the third business day prior to the date fixed for redemption, would be equal to the gross redemption yield on such business day of the Comparable Government Bond on the basis of the middle market price of the Comparable Government Bond prevailing at 11:00 a.m. (London time) on such business day as determined by an independent investment bank selected by us.

"*Consolidated Depreciation, Amortization and Accretion Expense*" means with respect to any Person for any period, the total amount of depreciation and amortization (including amortization of goodwill and other intangibles but excluding amortization of prepaid cash expenses that were paid in a prior period) and accretion expense, including the amortization of deferred financing fees or costs of such Person and its Restricted Subsidiaries for such period, on a consolidated basis and otherwise determined in accordance with GAAP.

"*Consolidated EBITDA*" means, with respect to any Person for any period, the Consolidated Net Income of such Person for such period:

(a) increased (without duplication) by the following, in each case to the extent deducted in determining Consolidated Net Income for such period:

(1) provision for taxes based on income or profits or capital, including, without limitation, federal, state, franchise and similar taxes and foreign withholding taxes (including any levy, impost, deduction, charge, rate, duty, compulsory loan or withholding which is levied or imposed by a governmental agency, and any related interest, penalty, charge, fee or other amount) of such Person paid or accrued during such period deducted (and not added back) in computing Consolidated Net Income; plus

(2) Consolidated Interest Expense of such Person for such period to the extent the same were deducted (and not added back) in calculating such Consolidated Net Income; plus

(3) Consolidated Depreciation, Amortization and Accretion Expense of such Person for such period to the extent that the same were deducted (and not added back) in computing Consolidated Net Income; plus

(4) any expenses or charges (other than depreciation or amortization expense) related to any Equity Offering or the incurrence of Indebtedness permitted to be incurred in accordance with the applicable Indenture (including a refinancing thereof) (whether or not successful), in each case, deducted (and not added back) in computing Consolidated Net Income; plus

(5) any other Non-cash Charges, including any provisions, provision increases, write-offs or write-downs reducing Consolidated Net Income for such period (provided that if any such Non-cash Charges represent an accrual or reserve for potential cash items in any future period, the cash payment in respect thereof in such future period shall be subtracted from Consolidated EBITDA to such extent), and excluding amortization of a prepaid cash item that was paid in a prior period; plus

(6) any costs or expenses incurred by us or a Restricted Subsidiary pursuant to any management equity plan or stock option plan or any other management or employee benefit plan or agreement or any stock subscription or stockholder agreement, to the extent that such cost or expenses are funded with cash proceeds contributed to our capital or net cash proceeds of an issuance of Equity Interest of us (other than Disqualified Capital Stock); plus

(7) cash receipts (or any netting arrangements resulting in reduced cash expenditures) not representing Consolidated EBITDA or Consolidated Net Income in any period to the extent non-cash gains relating to such income were deducted in the calculation of Consolidated EBITDA pursuant to clause (b) below for any previous period and not added back; plus

(8) any net loss from disposed or discontinued operations; plus

(9) any net unrealized loss (after any offset) resulting in such period from obligations under any Currency Agreements and the application of FASB Accounting Standards Codification ("ASC") 815; provided that to the extent any such Currency Agreement relates to items included in the preparation of the income statement (as opposed to the balance sheet, as reasonably determined by us), the realized loss on a Currency Agreement shall be included to the extent the amount of such hedge gain or loss was excluded in a prior period; plus

(10) any net unrealized loss (after any offset) resulting in such period from (A) currency translation or exchange losses including those (x) related to currency remeasurements of Indebtedness and (y) resulting from hedge agreements for currency exchange risk and (B) changes in the fair value of Indebtedness resulting from changes in interest rates; plus

(11) the amount of any minority interest expense (less the amount of any cash dividends paid in such period to holders of such minority interests); plus

(12) the amount of any costs and expenses associated with the Company Conversion, including, without limitation, planning and advisory costs related to the foregoing; and

(b) decreased (without duplication) by the following, in each case to the extent included in determining Consolidated Net Income for such period:

(1) non-cash gains increasing Consolidated Net Income of such Person for such period, excluding any non-cash gains to the extent they represent the reversal of an accrual or reserve for a potential cash item that reduced Consolidated EBITDA in any prior period and any non-cash gains with respect to cash actually received in a prior period so long as such cash did not increase Consolidated EBITDA in such prior period;

(2) any net gain from disposed or discontinued operations;

(3) any net unrealized gain (after any offset) resulting in such period from obligations under any Currency Agreements and the application of ASC 815; provided that to the extent any such Currency Agreement relates to items included in the preparation of the income statement (as opposed to the balance sheet, as reasonably determined by us), the realized gain on a Currency Agreement shall be included to the extent the amount of such hedge gain or loss was excluded in a prior period; plus

(4) any net unrealized gains (after any offset) resulting in such period from (A) currency translation or exchange gains including those (x) related to currency remeasurements of Indebtedness and (y) resulting from hedge agreements for currency exchange risk and (B) changes in the fair value of Indebtedness resulting from changes in interest rates.

For purposes of this definition, calculations shall be done after giving effect on a pro forma basis for the period of such calculation to:

(1) the incurrence or repayment of any Indebtedness or the designation or elimination (including by de-designation) of any Designated Revolving Commitments of such Person or any of its Restricted Subsidiaries (and the application of the proceeds thereof) giving rise to the need to make such calculation and any incurrence or repayment of other Indebtedness (and the application of the proceeds thereof), other than the incurrence or repayment of Indebtedness in the ordinary course of business for working capital purposes pursuant to working capital facilities, occurring during the four full fiscal quarters (the "Four Quarter Period") ending prior to the date of the transaction giving rise to the need to make such calculation

(the “Transaction Date”) for which financial statements are available, or at any time subsequent to the last day of the Four Quarter Period and on or prior to the Transaction Date, as if such incurrence or repayment of Indebtedness or designation or elimination (including by de-designation) of Designated Revolving Commitments, as the case may be (and the application of the proceeds thereof), occurred on the first day of the Four Quarter Period and in the case of Designated Revolving Commitments, as if Indebtedness in the full amount of any undrawn Designated Revolving Commitments had been incurred throughout such period); and

(2) any asset sales or other dispositions or Asset Acquisitions (including, without limitation, any Asset Acquisition giving rise to the need to make such calculation as a result of such Person or one of its Restricted Subsidiaries (including any Person who becomes a Restricted Subsidiary as a result of the Asset Acquisition) incurring, assuming or otherwise being liable for Acquired Indebtedness and also including any Consolidated EBITDA (including any pro forma expense and cost reductions calculated on a basis consistent with Regulation S-X promulgated under the Exchange Act) attributable to the assets which are the subject of the Asset Acquisition or asset sale or other disposition during the Four Quarter Period) occurring during the Four Quarter Period or at any time subsequent to the last day of the Four Quarter Period and on or prior to the Transaction Date, as if such asset sale or other disposition or Asset Acquisition (including the incurrence, assumption or liability for any such Acquired Indebtedness) occurred on the first day of the Four Quarter Period. If such Person or any of its Restricted Subsidiaries directly or indirectly guarantees Indebtedness of a third Person, the preceding sentence shall give effect to the incurrence of such guaranteed Indebtedness as if such Person or any Restricted Subsidiary of such Person had directly incurred or otherwise assumed such guaranteed Indebtedness.

“*Consolidated Interest Expense*” means, with respect to any Person for any period, the sum of, without duplication:

(1) the aggregate of the interest expense of such Person and its Restricted Subsidiaries for such period determined on a consolidated basis in accordance with GAAP, including without limitation:

(a) any amortization of debt discount and the amortization or write-off of deferred financing costs, including commitment fees;

(b) the net costs under Interest Swap Obligations;

(c) all capitalized interest;

(d) non-cash interest expense (other than non-cash interest on any convertible or exchangeable debt issued by us that exists by virtue of the bifurcation of the debt and equity components of such convertible or exchangeable Notes and the application of ASC 470-20 (or related accounting pronouncement(s)));

(e) commissions, discounts and other fees and charges owed with respect to letters of credit and banker’s acceptance financing;

(f) dividends with respect to Disqualified Capital Stock;

(g) dividends with respect to Preferred Stock of Restricted Subsidiaries of such Person;

(h) imputed interest with respect to Sale and Leaseback Transactions; and

(i) the interest portion of any deferred payment obligation; plus

(2) the interest component of Finance Lease Obligations paid, accrued and/or scheduled to be paid or accrued by such Person and its Restricted Subsidiaries during such period as determined on a consolidated basis in accordance with GAAP; less

(3) interest income for such period.

"*Consolidated Net Income*" means, with respect to any Person, for any period, the aggregate net income (or loss) of such Person and its Restricted Subsidiaries for such period on a consolidated basis, determined in accordance with GAAP; *provided* that there shall be excluded therefrom (without duplication):

(1) any after tax effect of extraordinary, non-recurring or unusual gains or losses (including all fees and expenses relating thereto) or expenses;

(2) any net after tax gains or losses on disposal of disposed, abandoned or discontinued operations;

(3) any after tax effect of gains or losses (including all fees and expenses relating thereto) attributable to sale, transfer, license, lease or other disposition of assets or abandonments or the sale, transfer or other disposition of any Equity Interest of any Person other than in the normal course of business;

(4) the net income for such period of any Person that is not a Subsidiary, or is an Unrestricted Subsidiary, or that is accounted for by the equity method of accounting, except to the extent of cash dividends or distributions paid to us or to a Restricted Subsidiary of ours by such Person;

(5) any after tax effect of income (loss) from the early extinguishment of (1) Indebtedness, (2) obligations under any Currency Agreement or (3) other derivative instruments;

(6) any impairment charge or asset write-off or write-down, including impairment charges or asset write-offs or write-downs related to intangible assets, long-lived assets, investments in debt and equity securities or as a result of a change in law or regulation, in each case, pursuant to GAAP, and the amortization of intangibles arising pursuant to GAAP;

(7) any non-cash compensation charge or expense including any such charge arising from the grants of stock appreciation or similar rights, stock options, restricted stock or other rights;

(8) any fees and expenses incurred during such period, or any amortization thereof for such period, in connection with any issuance or repayment of Indebtedness, issuance of Equity Interests, refinancing transaction, amendment or modification of any debt instrument;

(9) income or loss attributable to discontinued operations (including, without limitation, operations disposed of during such period whether or not such operations were classified as discontinued);

(10) in the case of a successor to the referent Person by consolidation or merger or as a transferee of the referent Person's assets, any earnings of the successor entity prior to such consolidation, merger or transfer of assets;

(11) the net income (but not loss) of any Restricted Subsidiary of the referent Person to the extent that the declaration of dividends or similar distributions by that Restricted Subsidiary of that income is restricted by contract, operation of law or otherwise; and

(12) acquisition-related costs resulting from the application of ASC 805.

In addition, to the extent not already included in the Consolidated Net Income of such Person and its Restricted Subsidiaries, notwithstanding anything to the contrary in the foregoing, but without duplication, Consolidated Net Income shall include the amount of proceeds received from business interruption insurance and reimbursements of any expenses and charges that are covered by indemnification or other reimbursement provisions in connection with any sale, conveyance, transfer or other disposition of assets permitted under the Indentures (in each case, whether or not non-recurring).

"*Currency Agreement*" means any foreign exchange contract, currency swap agreement or other similar agreement or arrangement designed to protect us or any Restricted Subsidiary of ours against fluctuations in currency values.

"*Default*" means an event or condition the occurrence of which is, or with the lapse of time or the giving of notice or both would be, an Event of Default.

"*Designated Revolving Commitments*" means the amount or amounts of any commitments to make loans or extend credit on a revolving basis to us or any of its Restricted Subsidiaries by any Person other than us or any of our Restricted Subsidiaries that has or have been designated (but only to the extent so designated) in an officers' certificate delivered to the Trustee as "*Designated Revolving Commitments*" until such time as we subsequently delivers an officers' certificate to the Trustee to the effect that the amount or amounts of such commitments shall no longer constitute "*Designated Revolving Commitments*."

"*Disqualified Capital Stock*" means that portion of any Capital Stock which, by its terms (or by the terms of any security into which it is convertible or for which it is exchangeable at the option of the holder thereof), or upon the happening of any event (other than an event which would constitute a Change of Control), matures or is mandatorily redeemable pursuant to a sinking fund obligation or otherwise, or is redeemable at the sole option of the holder thereof (except, in each case, upon the occurrence of a Change of Control), in each case, on or prior to the final maturity date of the Notes.

"*Domestic Restricted Subsidiary*" means a Restricted Subsidiary incorporated or otherwise organized under the laws of the United States, any State thereof or the District of Columbia.

"*Equity Interests*" means Capital Stock and all warrants, options or other rights to acquire Capital Stock, but excluding any debt security that is convertible into, or exchangeable for, Capital Stock.

"*Equity Offering*" means any public or private sale of our Common Stock or Preferred Stock (excluding Disqualified Stock), other than:

(a) public offerings with respect to our or any direct or indirect parent company's Common Stock registered on Form S-4 or Form S-8 (or similar forms under non-U.S. law);

(b) issuances to any Subsidiary of ours;

(c) issuances pursuant to the exercise of options or warrants outstanding on the date hereof;

(d) issuances upon conversion of securities convertible into Common Stock outstanding on the date hereof;

(e) issuances in connection with an acquisition of property in a transaction entered into on an arm's-length basis; and

(f) issuances pursuant to employee stock plans.

"*euro*" or "€" means the lawful currency of the member states of the European Union who have agreed to share a common currency in accordance with the provisions of the Maastricht Treaty dealing with European monetary union.

"*Euroclear*" means Euroclear Bank S.A./N.V., or any successor securities clearing agency.

"*European Government Obligations*" means direct obligations (or certificates representing an ownership interest in such obligations) of a member state of the European Union (including any agency or instrumentality thereof) for the payment of which the full faith and credit of such government is pledged.

"*Exchange Act*" means the Securities Exchange Act of 1934, as amended from time to time, and any successor statute.

"*fair market value*" means, with respect to any asset or property, the price which could be negotiated in an arm's-length, free market transaction, for cash, between a willing seller and a willing and able buyer, neither of whom is under undue pressure or compulsion to complete the transaction. Fair market value shall be determined by our Board of Directors or any duly appointed officer of ours or a Restricted Subsidiary, as applicable, acting reasonably and in good faith and, in respect of any asset or property with a fair market value in excess of $50.0 million, shall be determined by our Board of Directors and shall be evidenced by a Board Resolution of our Board of Directors delivered to the Trustee.

"*Finance Lease Obligations*" means, as to any Person, the obligations of such Person under a lease that are required to be classified and accounted for as finance lease obligations under GAAP and, for purposes of this definition, the amount of such obligations at any date shall be the capitalized amount of such obligations at such date, determined in accordance with GAAP.

"*Fitch*" means Fitch Ratings Inc., or any successor to the rating agency business thereof.

"*GAAP*" means generally accepted accounting principles set forth in the statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as may be approved by a significant segment of the accounting profession of the United States, which are in effect as of July 11, 2011.

"*Indebtedness*" means with respect to any Person, without duplication:

(1) all Obligations of such Person for borrowed money;

(2) all Obligations of such Person evidenced by bonds, debentures, Notes or other similar instruments;

(3) all Finance Lease Obligations and all Attributable Debt of such Person;

(4) all Obligations of such Person issued or assumed as the deferred purchase price of property, all conditional sale obligations and all Obligations under any title retention agreement (but excluding (i) trade accounts payable and other accrued liabilities arising in the ordinary course of business that are not overdue by 120 days or more or are being contested in good faith by appropriate proceedings promptly instituted and diligently conducted and (ii) any earn-out obligation until such obligation becomes a liability on the balance sheet of such Person in accordance with GAAP);

(5) all Obligations for the reimbursement of any obligor on any letter of credit, banker's acceptance or similar credit transaction (other than obligations with respect to letters of credit (A) securing Obligations (other than Obligations described in (1)-(4) above) entered into the ordinary course of business of such Person to the extent such letters of credit are not drawn upon or, if and to the extent drawn upon, such drawing is reimbursed no later than the fifth business day following receipt by such Person of a demand for reimbursement following payment on the letter of credit) or (B) that are otherwise cash collateralized;

(6) guarantees and other contingent obligations in respect of Indebtedness referred to in clauses (1) through (5) above and clause (8) below;

(7) all Obligations of any other Person of the type referred to in clauses (1) through (6) that are secured by any Lien on any property or asset of such Person, the amount of such Obligation being deemed to be the lesser of the fair market value of such property or asset or the amount of the Obligation so secured;

(8) all Obligations under Currency Agreements and Interest Swap Obligations of such Person;

(9) all Disqualified Capital Stock issued by such Person or Preferred Stock issued by such Person's non-Domestic Restricted Subsidiaries with the amount of Indebtedness represented by such Disqualified Capital Stock or Preferred Stock being equal to the greater of its voluntary or involuntary liquidation preference and its maximum fixed repurchase price, but excluding accrued dividends, if any; and

(10) the aggregate amount of Designated Revolving Commitments in effect on such date.

For purposes hereof, the "*maximum fixed repurchase price*" of any Disqualified Capital Stock which does not have a fixed repurchase price shall be calculated in accordance with the terms of such Disqualified Capital Stock as if such Disqualified Capital Stock were purchased on any date on which Indebtedness shall be required to be determined pursuant to the Indentures, and if such price is based upon, or measured by, the fair market value of such Disqualified Capital Stock, such fair market value shall be determined reasonably and in good faith by the Board of Directors of the issuer of such Disqualified Capital Stock.

"*Interest Swap Obligations*" means the obligations of any Person pursuant to any arrangement with any other Person, whereby, directly or indirectly, such Person is entitled to receive from time to time periodic payments calculated by applying either a floating or a fixed rate of interest on a stated notional amount in exchange for periodic payments made by such other Person calculated by applying a fixed or a floating rate of interest on the same notional amount and shall include, without limitation, interest rate swaps, caps, floors, collars and similar agreements.

"*Investment Grade Rating*" means a rating equal to or greater than BBB- by S&P and Fitch and Baa3 by Moody's or the equivalent thereof under any new ratings system if the ratings system of any such agency shall be modified after the Issue Date, or the equivalent rating of any other Rating Agency selected by us as provided in the definition of "Rating Agency."

"*Issue Date*" means March 10, 2021.

"*Lien*" means any lien, mortgage, deed of trust, pledge, security interest, charge or encumbrance of any kind (including any conditional sale or other title retention agreement, any lease in the nature thereof and any agreement to give any security interest); provided that, in any event and not in limitation of the foregoing, a lease shall not be deemed to be a Lien if such lease is classified as an operating lease under GAAP.

"*Material Subsidiary*" means a "significant subsidiary" as defined in Rule 1-02(w) of Regulation S-X under the Securities Act.

"*Moody's*" means Moody's Investors Service, Inc., or any successor to the rating agency business thereof.

"*Non-cash Charges*" means, with respect to any Person, (a) losses on asset sales, disposals or abandonments, (b) any impairment charge or asset write-off related to intangible assets, long-lived assets, and investments in debt and equity securities pursuant to GAAP, (c) all losses from investments recorded using the equity method, (d) stock-based awards compensation expense, and (e) other non-cash charges (provided that if any non-cash charges referred to in this clause (e) represent an accrual or reserve for potential cash items in any future period, the cash payment in respect thereof in such future period shall be subtracted from Consolidated EBITDA to such extent, and excluding amortization of a prepaid cash item that was paid in a prior period).

"*Obligations*" means all obligations for principal, premium, interest, penalties, fees, indemnifications, reimbursements, damages and other liabilities payable under the documentation governing any Indebtedness.

"*Pari Passu Indebtedness*" means any Indebtedness of ours that ranks pari passu in right of payment with the applicable series of Notes.

"*Participating Member State*" means each state, so described in any European Monetary Union legislation, which was a participating member state on December 31, 2003.

"*Permitted Liens*" means the following types of Liens:

(1) Liens for taxes, assessments or governmental charges or claims either (a) not delinquent or (b) contested in good faith by appropriate proceedings and as to which we or our Restricted Subsidiaries shall have set aside on its books such reserves as may be required pursuant to GAAP;

(2) statutory Liens of landlords and Liens of carriers, warehousemen, mechanics, suppliers, materialmen, repairmen and other Liens imposed by law incurred in the ordinary course of business for sums not yet delinquent or being contested in good faith, if such reserve or other appropriate provision, if any, as shall be required by GAAP shall have been made in respect thereof;

(3) Liens incurred or deposits made in the ordinary course of business in connection with workers' compensation, unemployment insurance and other types of social security, including any Lien securing letters of credit issued in the ordinary course of business consistent with past practice in connection therewith, or to secure the performance of tenders, statutory obligations, surety and appeal bonds, bids, leases, government contracts, performance and return-of-money bonds and other similar obligations (exclusive of obligations for the payment of borrowed money);

(4) judgment Liens not giving rise to an Event of Default so long as such Lien is adequately bonded and any appropriate legal proceedings which may have been duly initiated for the review of such judgment shall not have been finally terminated or the period within which such proceedings may be initiated shall not have expired;

(5) easements, rights-of-way, zoning restrictions and other similar charges or encumbrances in respect of real property not interfering in any material respect with the ordinary conduct of our business or any of our Restricted Subsidiaries;

(6) any interest or title of a lessor under any Finance Lease Obligation; provided that such Liens do not extend to any property or assets which is not leased property subject to such Finance Lease Obligation (other than other property that is subject to a separate lease from such lessor or any of its Affiliates);

(7) Liens securing Purchase Money Indebtedness incurred in the ordinary course of business; provided that (a) such Purchase Money Indebtedness shall not exceed the purchase price or other cost of such property or equipment and shall not be secured by any property or equipment of ours or any Restricted Subsidiary of ours other than the property and equipment so acquired or other property that was acquired from such seller or any of its Affiliates with the proceeds of Purchase Money Indebtedness and (b) the Lien securing such Purchase Money Indebtedness shall be created within 360 days of such acquisition;

(8) Liens upon specific items of inventory or other goods and proceeds of any Person securing such Person's obligations in respect of bankers' acceptances issued or created for the account of such Person to facilitate the purchase, shipment or storage of such inventory or other goods;

(9) Liens securing reimbursement obligations with respect to commercial letters of credit which encumber documents and other property relating to such letters of credit and products and proceeds thereof;

(10) Liens securing Interest Swap Obligations;

(11) Liens securing Indebtedness under Currency Agreements;

(12) Liens securing Acquired Indebtedness; *provided that*:

(a) such Liens secured such Acquired Indebtedness at the time of and prior to the incurrence of such Acquired Indebtedness by us or a Restricted Subsidiary of ours and were not granted in connection with, or in anticipation of, the incurrence of such Acquired Indebtedness by us or a Restricted Subsidiary of ours; and

(b) such Liens do not extend to or cover any property or assets of ours or of any of our Restricted Subsidiaries other than the property or assets that secured the Acquired Indebtedness prior to the time such Indebtedness became Acquired Indebtedness of ours or a Restricted Subsidiary of ours and are no more favorable to the lienholders than those securing the Acquired Indebtedness prior to the incurrence of such Acquired Indebtedness by us or a Restricted Subsidiary of ours;

(13) Liens on assets of a Restricted Subsidiary of ours;

(14) leases, subleases, licenses and sublicenses granted to others that do not materially interfere with the ordinary course of business of us and our Restricted Subsidiaries;

(15) banker's Liens, rights of setoff and similar Liens with respect to cash and Cash Equivalents on deposit in one or more bank accounts in the ordinary course of business;

(16) Liens arising from filing Uniform Commercial Code financing statements regarding leases;

(17) Liens in favor of customs and revenue authorities arising as a matter of law to secure payments of customs duties in connection with the importation of goods;

(18) Liens (a) on inventory held by and granted to a local distribution company in the ordinary course of business and (b) in accounts purchased and collected by and granted to a local distribution company that has agreed to make payments to us or any of our Restricted Subsidiaries for such amounts in the ordinary course of business;

(19) [Reserved];

(20) Liens securing Indebtedness in respect of Sale and Leaseback Transactions;

(21) [Reserved];

(22) Liens securing Indebtedness in respect of mortgage financings; and

(23) Liens with respect to obligations (including Indebtedness) of us or any of our Restricted Subsidiaries otherwise permitted under the Indentures that do not exceed an amount equal to 3.5 times our Consolidated EBITDA for the Four Quarter Period to and including the most recent fiscal quarter for which our financial statements are internally available immediately preceding such date.

"*Person*" means an individual, partnership, corporation, limited liability company, unincorporated organization, trust or joint venture, or a governmental agency or political subdivision thereof.

"*Preferred Stock*" of any Person means any Capital Stock of such Person that has preferential rights to any other Capital Stock of such Person with respect to dividends or redemptions or upon liquidation.

"*Purchase Money Indebtedness*" means Indebtedness of ours and our Restricted Subsidiaries incurred in the normal course of business for the purpose of financing all or any part of the purchase price, or the cost of installation, construction or improvement, of property or equipment.

"*Rating Agency*" means (1) each of Fitch, Moody's and S&P and (2) if Fitch, Moody's or S&P ceases to rate the applicable series of Notes for reasons outside of our control, a "nationally recognized statistical rating organization" as such term is defined in Section 3(a)(62) of the Exchange Act selected by us as a replacement agency for Fitch, Moody's or S&P, as the case may be.

"*Rating Event*" means the Notes of an applicable series are downgraded by at least one rating category from the applicable rating of such Notes on the first day of the Trigger Period by two of the Rating Agencies and/or cease to be rated by two of the Rating Agencies, in each case, on any date during the Trigger Period; provided that a Rating Event will not be deemed to have occurred unless the rating category of the applicable series of Notes is below an Investment Grade Rating by two of the Rating Agencies; *provided, further*, that a Rating Event will not be deemed to have occurred in respect of a particular Change of Control if each applicable downgrading Rating Agency does not publicly announce or confirm or inform the Trustee in writing at the our request that the reduction was the result of the Change of Control (whether or not the applicable Change of Control has occurred at the time of the Change of Control Triggering Event). Notwithstanding the foregoing, no Rating Event will be deemed to have occurred in connection with any particular Change of Control unless and until such Change of Control has actually been consummated; *provided* that in the event that a Rating Agency does not provide a rating of an applicable series of Notes on the first day of the Trigger Period, such absence of rating shall be treated as both a downgrade in the rating of such Notes below an Investment Grade Rating by such Rating Agency and a downgrade that results in such Notes no longer being rated at the rating category in effect on the first day of the Trigger Period by such Rating Agency, in each case, and shall not be subject to the second proviso in the immediately preceding sentence. The Trustee shall have no obligation to determine whether a Rating Event has occurred.

"*REIT*" means a "real estate investment trust" as defined and taxed under Sections 856-860 of the Code.

"*Restricted Subsidiary*" of any Person means any Subsidiary of such Person which at the time of determination is not an Unrestricted Subsidiary.

"*S&P*" means Standard & Poor's Ratings Group, Inc., or any successor to the rating agency business thereof.

"*Sale and Leaseback Transaction*" means any direct or indirect arrangement with any Person or to which any such Person is a party, providing for the leasing to us or a Restricted Subsidiary of any property, whether owned by us or any Restricted Subsidiary at the Issue Date or later acquired, which has been or is to be sold or transferred by us or such Restricted Subsidiary to such Person or to any other Person from whom funds have been or are to be advanced by such Person on the security of such Property.

"*Secured Indebtedness*" means any Indebtedness secured by a Lien on any of our assets or any of our Restricted Subsidiaries.

"*Securities Act*" means the Securities Act of 1933, as amended from time to time, and any successor statute. "Subordinated Indebtedness" means Indebtedness of ours that is subordinated or junior in right of payment to the Notes.

"*Subsidiary*," with respect to any Person, means:

(1) any corporation of which the outstanding Capital Stock having at least a majority of the votes entitled to be cast in the election of directors under ordinary circumstances shall at the time be owned, directly or indirectly, by such Person; or

(2) any other Person of which at least a majority of the voting interest under ordinary circumstances is at the time, directly or indirectly, owned by such Person.

"*Tax*" or "*Taxes*" means all present and future taxes, levies, imposts, deductions, charges, duties and withholdings (including backup withholdings), fees and any charges of a similar nature (including interest, fines, penalties and other liabilities with respect thereto) that are imposed by any government or other taxing authority.

"*Trigger Period*" means the 60-day period commencing on the earlier of (i) the occurrence of a Change of Control or (ii) the first public announcement of the occurrence of a Change of Control or our intention to effect a Change of Control (which Trigger Period will be extended so long as the ratings of the applicable Notes are under publicly announced consideration for possible downgrade by any two of the three Rating Agencies); provided that the Trigger Period will terminate with respect to each Rating Agency when such Rating Agency takes action (including affirming its existing ratings) with respect to such Change of Control.

"*Unrestricted Subsidiary*" of any Person means:

(1) any Subsidiary of such Person that at the time of determination shall be or continue to be designated an Unrestricted Subsidiary by the Board of Directors of such Person in the manner provided below; and

(2) any Subsidiary of an Unrestricted Subsidiary.

Our Board of Directors may designate any Subsidiary (including any newly acquired or newly formed Subsidiary) to be an Unrestricted Subsidiary unless such Subsidiary owns any Capital Stock of, or owns or holds any Lien on any property of, we or any other Subsidiary of ours that is not a Subsidiary of the Subsidiary to be so designated; provided that each Subsidiary to be so designated and each of its Subsidiaries has not at the time of designation, and does not thereafter, create, incur, issue, assume, guarantee or otherwise become directly or indirectly liable with respect to any Indebtedness pursuant to which the lender has recourse to any of our assets of or any of our Restricted Subsidiaries.

The Board of Directors may designate any Unrestricted Subsidiary to be a Restricted Subsidiary only if, immediately before and immediately after giving effect to such designation, no Default or Event of Default shall have occurred and be continuing. Any such designation by the Board of Directors shall be evidenced to the Trustee by promptly filing with the Trustee a copy of the Board Resolution giving effect to such designation and an officers' certificate certifying that such designation complied with the foregoing provisions.

"*Wholly Owned Restricted Subsidiary*" means a Restricted Subsidiary, all of the Capital Stock of which (other than directors' qualifying shares) is owned by us or another Wholly Owned Restricted Subsidiary.

Exhibit 10.4

Equinix, Inc.
2004 Employee Stock Purchase Plan

(As Adopted Effective June 3, 2004)

(As Amended Effective January 27, 2010)

(As Amended Effective January 21, 2013)

(As Amended Effective June 4, 2014)

(As Amended Effective January 19, 2023)

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Equinix, Inc. 2004 Employee Stock Purchase Plan

SECTION 1. PURPOSE OF THE PLAN.

The Board adopted the Plan to be effective as of June 3, 2004. The purpose of the Plan is to provide Eligible Employees with an opportunity to increase their proprietary interest in the success of the Company by purchasing Stock from the Company on favorable terms and to pay for such purchases through payroll deductions.

SECTION 2. ADMINISTRATION OF THE PLAN.

(a) **Committee Composition**. The Committee shall administer the Plan. The Committee shall consist exclusively of one or more directors of the Company, who shall be appointed by the Board.

(b) **Committee Responsibilities**. The Committee shall interpret the Plan and make all other policy decisions relating to the operation of the Plan. The Committee may adopt such rules, guidelines, sub-plans and forms as it deems appropriate to implement the Plan. The Committee's determinations under the Plan shall be final and binding on all persons.

SECTION 3. ENROLLMENT AND PARTICIPATION.

(a) **Offering Periods**.

(i) *Base Offering Periods.* While the Plan is in effect, two overlapping Offering Periods shall commence in each calendar year (the "Base Periods"). Such Offering Periods shall consist of the 24-month periods commencing on each February 15 and August 15 or such other periods or dates selected from time to time by the Committee. The other terms and conditions of each Base Offering Period shall be those set forth in this Plan document to the extent such terms are consistent with the requirements for qualification under Section 423 of the Code. The Base Offering Periods are intended to qualify under Section 423 of the Code.

(ii) *Additional Offering Periods.* At the discretion of the Committee, additional Offering Periods may be conducted under the Plan. Such Offering Periods may, but need not, be intended to qualify under Section 423 of the Code. The Committee shall determine the commencement and duration of each Offering Period, and Offering Periods may be consecutive or overlapping. The other terms and conditions of each Offering Period shall be those set forth in this Plan document, with such changes or additional features as the Committee determines necessary to comply with local law.

(iii) *Separate Offerings.* Each Offering Period conducted under the Plan is intended to constitute a separate "offering" for purposes of Section 423 of the Code.

(iv) *Equal Rights and Privileges*. To the extent an Offering Period is intended to qualify under Section 423 of the Code, all participants in such Offering Period shall have the same rights and privileges with respect to their participation in such Offering Period in accordance with Section 423 of the Code and the regulations thereunder except for differences that may be mandated by local law and are consistent with the requirements of Section 423(b)(5) of the Code.

(b) **Accumulation Periods**. While the Plan is in effect, two Accumulation Periods shall commence in each calendar year. The Accumulation Periods shall consist of the six-month periods commencing on each February 15 and August 15 or such other periods or dates selected from time to time by the Committee. If additional Offering Periods are conducted, the Committee shall determine the Accumulation Periods applicable to such Offering Periods.

(c) **Enrollment**. Any individual who, on the seventh calendar day preceding the first day of an Offering Period, qualifies as an Eligible Employee may elect to become a Participant in the Plan for such Offering Period by executing the enrollment form prescribed for this purpose by the Committee. The Committee may require the completion of a period of eligibility service for all Eligible Employees prior to the start of any Offering Period. The enrollment form shall be filed with the Company at the prescribed location not later than 10 business days prior to the commencement of such Offering Period, except that the Company may announce a deadline that is less than 10 business days prior to the commencement of an Offering Period.

(d) **Duration of Participation**. Once enrolled in the Plan, a Participant shall continue to participate in the Plan until he or she ceases to be an Eligible Employee, withdraws from the Plan under Section 5(a) or reaches the end of the Accumulation Period in which his or her employee contributions were discontinued under Section 4(d) or 8(b). A Participant who discontinued employee contributions under Section 4(d) or withdrew from the Plan under Section 5(a) may again become a Participant, if he or she then is an Eligible Employee, by following the procedure described in Subsection (c) above. A Participant whose employee contributions were discontinued automatically under Section 8(b) shall automatically resume participation at the beginning of the earliest Accumulation Period ending in the next calendar year, if he or she then is an Eligible Employee.

(e) **Applicable Offering Period**. For purposes of calculating the Purchase Price under Section 7(b), the applicable Offering Period shall be determined as follows:

(i) Once a Participant is enrolled in the Plan for an Offering Period, such Offering Period shall continue to apply to him or her until the earliest of (A) the end of such Offering Period, (B) the end of his or her participation under Subsection (d) above or (C) re-enrollment for a subsequent Offering Period under Paragraph (ii) or (iii) below.

(ii) In the event that the Fair Market Value of Stock on the last trading day before the commencement of the Offering Period for which the Participant is enrolled is higher than on the last trading day before the commencement of any subsequent Offering Period, the Participant shall automatically be re-enrolled for such subsequent Offering Period.

(iii) Any other provision of the Plan notwithstanding, the Company (at its sole discretion) may determine prior to the commencement of any new Offering Period that all Participants shall be re-enrolled for such new Offering Period.

(iv) When a Participant reaches the end of an Offering Period but his or her participation is to continue, then such Participant shall automatically be re-enrolled for the Offering Period that commences immediately after the end of the prior Offering Period.

SECTION 4. EMPLOYEE CONTRIBUTIONS.

(a) **Frequency of Payroll Deductions**. A Participant may purchase shares of Stock under the Plan solely by means of payroll deductions. Payroll deductions, as designated by the Participant pursuant to Subsection (b) below, shall occur on each payday during participation in the Plan.

(b) **Amount of Payroll Deductions**. An Eligible Employee shall designate on the enrollment form the portion of his or her Compensation that he or she elects to have withheld for the purchase of Stock. Such portion shall be a whole percentage of the Eligible Employee's Compensation, but not less than 1% nor more than 15%.

(c) **Changing Withholding Rate**. If a Participant wishes to change the rate of payroll withholding, he or she may do so by filing a new enrollment form with the Company at the prescribed location at any time. The new withholding rate shall be effective as soon as reasonably practicable after the Company has received such form. The new withholding rate shall be a whole percentage of the Eligible Employee's Compensation, but not less than 1% nor more than 15%.

(d) **Discontinuing Payroll Deductions**. If a Participant wishes to discontinue employee contributions entirely, he or she may do so by filing a new enrollment form with the Company at the prescribed location at any time. Payroll withholding shall cease as soon as reasonably practicable after the Company has received such form. (In addition, employee contributions may be discontinued automatically pursuant to Section 8(b).) A Participant who has discontinued employee contributions may resume such contributions by filing a new enrollment form with the Company at the prescribed location. Payroll withholding shall resume as soon as reasonably practicable after the Company has received such form.

(e) **Limit on Number of Elections**. No Participant shall make more than two elections under Subsection (c) or (d) above during any Accumulation Period or such lesser or greater number of elections as may be permitted by the Committee.

SECTION 5. WITHDRAWAL FROM THE PLAN.

(a) **Withdrawal**. A Participant may elect to withdraw from the Plan by filing the prescribed form with the Company at the prescribed location at any time before the last day of an Accumulation Period. As soon as reasonably practicable thereafter, payroll deductions shall cease and the entire amount credited to the Participant's Plan Account shall be refunded to him or her in cash, without interest. No partial withdrawals shall be permitted.

(b) **Re-Enrollment After Withdrawal**. A former Participant who has withdrawn from the Plan shall not be a Participant until he or she re-enrolls in the Plan under Section 3(c). Re-enrollment may be effective only at the commencement of an Offering Period.

SECTION 6. CHANGE IN EMPLOYMENT STATUS.

(a) **Termination of Employment**. Termination of employment as an Eligible Employee for any reason, including death, shall be treated as an automatic withdrawal from the Plan under Section 5(a). (A transfer from one Participating Company to another shall not be treated as a termination of employment provided that both Participating Companies are then participating in the same Offering Period.)

(b) **Leave of Absence**. For purposes of the Plan, employment shall not be deemed to terminate when the Participant goes on a military leave, a sick leave or another *bona fide* leave of absence, if the leave was approved by the Company in writing. Employment, however, shall be deemed to terminate 90 days after the Participant goes on a leave, unless a contract or statute guarantees his or her right to return to work. Employment shall be deemed to terminate in any event when the approved leave ends, unless the Participant immediately returns to work.

(c) **Death**. In the event of the Participant's death, the amount credited to his or her Plan Account shall be paid to a beneficiary designated by him or her for this purpose on the prescribed form or, if none, to the Participant's estate. Such form shall be valid only if it was filed with the Company at the prescribed location before the Participant's death.

SECTION 7. PLAN ACCOUNTS AND PURCHASE OF SHARES.

(a) **Plan Accounts**. The Company shall maintain a Plan Account on its books in the name of each Participant. Whenever an amount is deducted from the Participant's Compensation under the Plan, such amount shall be credited to the Participant's Plan Account. Amounts credited to Plan Accounts shall not be trust funds and may be commingled with the Company's general assets and applied to general corporate purposes. No interest shall be credited to Plan Accounts.

(b) **Purchase Price**. The Purchase Price for each share of Stock purchased at the close of an Accumulation Period shall be that price determined by the Committee and announced prior to the first business day of an Offering Period and shall not be less than the lower of:

(i) 85% of the Fair Market Value of such share on the last trading day in such Accumulation Period; or

(ii) 85% of the Fair Market Value of such share on the last trading day before the commencement of the applicable Offering Period (as determined under Section 3(e)).

(c) **Number of Shares Purchased**. As of the last day of each Accumulation Period, each Participant shall be deemed to have elected to purchase the number of shares of Stock calculated in accordance with this Subsection (c), unless the Participant has previously elected to withdraw from the Plan in accordance with Section 5(a). The amount then in the Participant's Plan Account shall be divided by the Purchase Price, and the number of shares that results shall be purchased from the Company with the funds in the Participant's Plan Account. The foregoing notwithstanding, no Participant shall purchase more than 2,500 shares of Stock (or such lesser number announced by the Committee prior to the start of an Offering Period) with respect to any Accumulation Period nor more than the amounts of Stock set forth in Sections 8(b) and 13(a). The Committee may determine with respect to all Participants that any fractional share, as calculated under this Subsection (c), shall be (i) rounded down to the next lower whole share or (ii) credited as a fractional share.

(d) **Available Shares Insufficient**. In the event that the aggregate number of shares that all Participants elect to purchase during an Accumulation Period exceeds the maximum number of shares remaining available for issuance under Section 13(a), then the number of shares to which each Participant is entitled shall be determined by multiplying the number of shares available for issuance by a fraction. The numerator of such fraction is the number of shares that such Participant has elected to purchase, and the denominator of such fraction is the number of shares that all Participants have elected to purchase.

(e) **Issuance of Stock**. Certificates representing the shares of Stock purchased by a Participant under the Plan shall be issued to him or her as soon as reasonably practicable after the close of the applicable Accumulation Period, except that the Committee may determine that such shares shall be held for each Participant's benefit by a broker designated by the Committee (unless the Participant has elected that certificates be issued to him or her).

(f) **Tax Withholding**. To the extent required by applicable federal, state, local or foreign law, a Participant shall make arrangements satisfactory to the Company for the satisfaction of any withholding tax obligations that arise in connection with the Plan. The Company shall not be required to issue any shares of Stock under the Plan until such obligations are satisfied.

(g) **Unused Cash Balances**. An amount remaining in the Participant's Plan Account that represents the Purchase Price for any fractional share shall be carried over in the Participant's Plan Account to the next Accumulation Period. Any amount remaining in the Participant's Plan Account that represents the Purchase Price for whole shares that could not be purchased by reason of Subsection (c) above, Section 8(b) or Section 13(a) shall be refunded to the Participant in cash, without interest.

(h) **Stockholder Approval**. Any other provision of the Plan notwithstanding, no shares of Stock shall be purchased under the Plan unless and until the Company's stockholders have approved the adoption of the Plan.

SECTION 8. LIMITATIONS ON STOCK OWNERSHIP.

(a) **Five Percent Limit**. Any other provision of the Plan notwithstanding, no Participant shall be granted a right to purchase Stock under the Plan if such Participant, immediately after his or her election to purchase such Stock, would own stock possessing more than 5% of the total combined voting power or value of all classes of stock of the Company or any parent or Subsidiary of the Company. For purposes of this Subsection (a), the following rules shall apply:

(i) Ownership of stock shall be determined after applying the attribution rules of section 424(d) of the Code;

(ii) Each Participant shall be deemed to own any stock that he or she has a right or option to purchase under this or any other plan; and

(iii) Each Participant shall be deemed to have the right to purchase 2,500 shares of Stock under this Plan with respect to each Accumulation Period.

(b) **Dollar Limit**. Any other provision of the Plan notwithstanding, no Participant shall purchase Stock with a Fair Market Value in excess of the following limit:

(i) In the case of Stock purchased during an Offering Period that commenced in the current calendar year, the limit shall be equal to (A) $25,000 minus (B) the Fair Market Value of the Stock that the Participant previously purchased in the current calendar year (under this Plan and all other employee stock purchase plans of the Company or any parent or Subsidiary of the Company).

(ii) In the case of Stock purchased during an Offering Period that commenced in the immediately preceding calendar year, the limit shall be equal to (A) $50,000 minus (B) the Fair Market Value of the Stock that the Participant previously purchased (under this Plan and all other employee stock purchase plans of the Company or any parent or Subsidiary of the Company) in the current calendar year and in the immediately preceding calendar year.

(iii) In the case of Stock purchased during an Offering Period that commenced in the second preceding calendar year, the limit shall be equal to (A) $75,000 minus (B) the Fair Market Value of the Stock that the Participant previously purchased (under this Plan and all other employee stock purchase plans of the Company or any parent or Subsidiary of the Company) in the current calendar year and in the two preceding calendar years.

For purposes of this Subsection (b), the Fair Market Value of Stock shall be determined in each case as of the beginning of the Offering Period in which such Stock is purchased. Employee stock purchase plans not described in section 423 of the Code shall be disregarded. If a Participant is precluded by this Subsection (b) from purchasing additional Stock under the Plan, then his or her employee contributions shall automatically be discontinued and shall resume at the beginning of the earliest Accumulation Period ending in the next calendar year (if he or she then is an Eligible Employee).

SECTION 9. RIGHTS NOT TRANSFERABLE.

The rights of any Participant under the Plan, or any Participant's interest in any Stock or moneys to which he or she may be entitled under the Plan, shall not be transferable by voluntary or involuntary assignment or by operation of law, or in any other manner other than by beneficiary designation or the laws of descent and distribution. If a Participant in any manner attempts to transfer, assign or otherwise encumber his or her rights or interest under the Plan, other than by beneficiary designation or the laws of descent and distribution, then such act shall be treated as an election by the Participant to withdraw from the Plan under Section 5(a).

SECTION 10. NO RIGHTS AS AN EMPLOYEE.

Nothing in the Plan or in any right granted under the Plan shall confer upon the Participant any right to continue in the employ of a Participating Company for any period of specific duration or interfere with or otherwise restrict in any way the rights of the Participating Companies or of the Participant, which rights are hereby expressly reserved by each, to terminate his or her employment at any time and for any reason, with or without cause.

SECTION 11. NO RIGHTS AS A STOCKHOLDER.

A Participant shall have no rights as a stockholder with respect to any shares of Stock that he or she may have a right to purchase under the Plan until such shares have been purchased on the last day of the applicable Accumulation Period.

SECTION 12. SECURITIES LAW REQUIREMENTS.

Shares of Stock shall not be issued under the Plan unless the issuance and delivery of such shares comply with (or are exempt from) all applicable requirements of law, including (without limitation) the Securities Act of 1933, as amended, the rules and regulations promulgated thereunder, state securities laws and regulations, and the regulations of any stock exchange or other securities market on which the Company's securities may then be traded.

SECTION 13. STOCK OFFERED UNDER THE PLAN.

(a) **Authorized Shares**. The number of shares of Stock available in the aggregate for purchase under the Plan and the International Plan from and after June 4, 2014 shall be the number of shares previously approved by stockholders and available as of such date, which is 3,821,533 shares (subject to adjustment pursuant to this Section 13).

(b) **Anti-Dilution Adjustments**. The aggregate number of shares of Stock offered under the Plan, the 2,500-share limitation described in Section 7(c), the share limitation described in Section 13(a) and the price of shares that any Participant has elected to purchase shall be adjusted proportionately by the Committee for any increase or decrease in the number of outstanding shares of Stock resulting from a subdivision or consolidation of shares or the payment of a stock dividend, any other increase or decrease in such shares effected without receipt or payment of consideration by the Company, the distribution of the shares of a Subsidiary to the Company's stockholders or a similar event.

(c) **Reorganizations**. Any other provision of the Plan notwithstanding, immediately prior to the effective time of a Corporate Reorganization, the Offering Period and Accumulation Period then in progress shall terminate and shares shall be purchased pursuant to Section 7, unless the Plan is continued or assumed by the surviving corporation or its parent corporation. The Plan shall in no event be construed to restrict in any way the Company's right to undertake a dissolution, liquidation, merger, consolidation or other reorganization.

SECTION 14. AMENDMENT OR DISCONTINUANCE.

The Board shall have the right to amend, suspend or terminate the Plan at any time and without notice. The Company's Chief Executive Officer may also amend the Plan to the extent allowable under applicable law to effect non-material amendments. Except as provided in Section 13, any increase in the aggregate number of shares of Stock to be issued under the Plan shall be subject to approval by a vote of the stockholders of the Company. In addition, any other amendment of the Plan shall be subject to approval by a vote of the stockholders of the Company to the extent required by an applicable law or regulation. The Plan shall terminate automatically June 4, 2024, unless (a) the Plan is extended by the Board and (b) the extension is approved within 12 months by a vote of the stockholders of the Company.

SECTION 15. DEFINITIONS.

(a) "**Accumulation Period**" means a period during which contributions may be made toward the purchase of Stock under the Plan, as determined pursuant to Section 3(b).

(b) "**Board**" means the Board of Directors of the Company, as constituted from time to time.

(c) "**Code**" means the Internal Revenue Code of 1986, as amended.

(d) "**Committee**" means a committee of the Board, as described in Section 2.

(e) "**Company**" means Equinix, Inc., a Delaware corporation.

(f) "**Compensation**" means (i) the total compensation paid in cash to a Participant by a Participating Company, including salaries, wages, bonuses, incentive compensation, commissions, overtime pay and shift premiums, plus (ii) any pre-tax contributions made by the Participant under section 401(k) or 125 of the Code. "Compensation" shall exclude all non-cash items, moving or relocation allowances, cost-of-living equalization payments, car allowances, tuition reimbursements, imputed income attributable to cars or life insurance, severance pay, fringe benefits, contributions or benefits received under employee benefit plans, income attributable to the exercise of stock options, and similar items. The Committee shall determine whether a particular item is included in Compensation.

(g) "**Corporate Reorganization**" means:

(i) The consummation of a merger or consolidation of the Company with or into another entity or any other corporate reorganization; or

(ii) The sale, transfer or other disposition of all or substantially all of the Company's assets or the complete liquidation or dissolution of the Company.

(h) "**Eligible Employee**" means any employee of a Participating Company whose customary employment is for more than five months per calendar year and for more than 20 hours per week. The foregoing notwithstanding, the Committee may determine prior to the commencement of an Offering Period that the foregoing exclusion on part-time employees shall not apply or to exclude employees whose customary employment is for fewer hours per week or fewer months in a calendar year; provided that such terms are applied in an identical manner to all employees of every Participating Company in such Offering Period. The foregoing notwithstanding, an individual shall not be considered an Eligible Employee if his or her participation in the Plan is prohibited by the law of any country which has jurisdiction over him or her or if he or she is subject to a collective bargaining agreement that does not provide for participation in the Plan. The foregoing notwithstanding, the Committee may, prior to the commencement of an Offering Period which is not intended to qualify under Section 423 of the Code, provide for additional restrictions on eligibility.

(i) "**Exchange Act**" means the Securities Exchange Act of 1934, as amended.

(j) "**Fair Market Value**" means the market price of Stock, determined by the Committee as follows:

(i) If the Stock was traded on The Nasdaq National Market or The Nasdaq SmallCap Market on the date in question, then the Fair Market Value shall be equal to the last-transaction price quoted for such date by such Market;

(ii) If the Stock was traded on a stock exchange on the date in question, then the Fair Market Value shall be equal to the closing price reported by the applicable composite transactions report for such date; or

(iii) If none of the foregoing provisions is applicable, then the Committee shall determine the Fair Market Value in good faith on such basis as it deems appropriate.

Whenever possible, the determination of Fair Market Value by the Committee shall be based on the prices reported directly to the Company by Nasdaq or a stock exchange. Such determination shall be conclusive and binding on all persons.

(k) "**International Plan**" shall mean a sub-plan of the Plan for non-U.S. employees. Offerings under the International Plan are intended to constitute separate offerings from those conducted under the Plan.

(l) "**Offering Period**" means a period with respect to which the right to purchase Stock may be granted under the Plan, as determined pursuant to Section 3(a), provided that an Offering Period shall in no event be longer than 27 months.

(m) "**Participant**" means an Eligible Employee who elects to participate in the Plan, as provided in Section 3(c).

(n) "**Participating Company**" means (i) the Company and (ii) each present or future Subsidiary designated by the Committee as a Participating Company.

(o) "**Plan**" means this Equinix, Inc. 2004 Employee Stock Purchase Plan, as it may be amended from time to time.

(p) "**Plan Account**" means the account established for each Participant pursuant to Section 7(a).

(q) "**Purchase Price**" means the price at which Participants may purchase Stock under the Plan, as determined pursuant to Section 7(b).

(r) "**Stock**" means the Common Stock of the Company.

(s) "**Subsidiary**" means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company, if each of the corporations other than the last corporation in the unbroken chain owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

Exhibit 10.24

CHANGE IN CONTROL SEVERANCE AGREEMENT

THIS AGREEMENT is entered into as of January 2, 2022 (the "***Effective Date***") by and between Jon Lin (the "***Executive***") and **EQUINIX, INC.**, a Delaware corporation (the "***Company***").

Term of Agreement.

Except to the extent renewed as set forth in this Section 1, this Agreement shall terminate the earlier of January 1, 2025 (the "***Expiration Date***") or the date the Executive's employment with the Company terminates for a reason other than a Qualifying Termination as described in Section 4(d); however, if a definitive agreement relating to a Change in Control has been signed by the Company on or before January 1, 2025, then this Agreement shall remain in effect through the earlier of:

The date the Executive's employment with the Company terminates for a reason other than a Qualifying Termination as described in Section 4(d); or

The date the Company has met all of its obligations under this Agreement following a termination of the Executive's employment with the Company for a reason described in Section 4(d).

This Agreement shall renew automatically and continue in effect for three-year periods measured from the initial Expiration Date, unless the Company provides Executive notice of non-renewal at least six months prior to the date on which this Agreement would otherwise expire.

Severance Payment.

Severance Benefit. If the Executive is subject to a Qualifying Termination, then the Company shall pay the Executive 200% of his or her annual base salary and target bonus (at the annual rate in effect immediately prior to the actions that resulted in the Qualifying Termination). The Executive will receive his or her severance payment in a cash lump-sum which will be made within ten (10) business days of the latest of the following dates:

the date of Executive's Qualifying Termination;

the date of the Company's receipt of the Executive's executed General Release; and

the expiration of any rescission period applicable to the Executive's executed General Release.

Health Care Benefit. If the Executive is subject to a Qualifying Termination, and if the Executive elects to continue his or her health insurance coverage under the Consolidated Omnibus Budget Reconciliation Act ("***COBRA***") following the termination of his or her employment, then the Company shall pay the Executive's monthly premium under COBRA until the earliest of (i) the close of the twenty four (24)-month period following cessation of his or her employment or (ii) the expiration of the Executive's continuation coverage under COBRA.

General Release. Any other provision of this Agreement notwithstanding, Subsections (a) and (b) above shall not apply unless the Executive (i) has executed a general release (in a form prescribed by the Company) of all known and unknown claims that he or she may then have against the Company or persons affiliated with the Company and (ii) has agreed not to prosecute any legal action or other proceeding based upon any of such claims. The release must be in the form prescribed by the Company, without alterations. The Company will deliver the form to the Executive within 30 days after the Executive's Separation. The Executive must execute and return the release within 21 days from receipt of the form.

Section 409A. For purposes of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***"), if the Company determines that Executive is a "specified employee" under Section 409A(a)(2)(B)(i) of the Code at the time of a Separation, then (i) the severance benefits under Section 2(a), to the extent that they are subject to Section 409A of the Code, will commence during the seventh month after the Executive's Separation and (ii) any amounts that otherwise would have been paid during the first six months after a Separation will be paid in a lump sum on the earliest practicable date permitted by Section 409A(a)(2) of the Code. If a severance payment is considered deferred compensation under Code Section 409A, then the Executive will receive his or her severance payment in a cash lump-sum which will be made on the 60^{th} day following Executive's Termination (or, if such day is not a business day, on the first business day thereafter).

Covenants.

Non-Solicitation. During the Executive's employment with the Company and during the twelve-month period following his or her cessation of employment, the Executive shall not directly or indirectly, personally or through others, solicit or attempt to solicit the employment of any employee or consultant of the Company or any of the Company's affiliates, whether on the Executive's own behalf or on behalf of any other person or entity. The Executive and the Company agree that this provision is reasonably enforced as to any geographic area in which the Company conducts its business.

Non-Competition. The Executive agrees that, during his or her employment with the Company, he or she shall not engage in any other employment, consulting or other business activity (whether full-time or part-time) that would create a conflict of interest with the Company.

Cooperation and Non-Disparagement. The Executive agrees that, during the twelve-month period following his or her cessation of employment, he or she shall cooperate with the Company in every reasonable respect and shall use his or her best efforts to assist the Company with the transition of Executive's duties to his or her successor. The Executive further agrees that, during this twelve-month period, he or she shall not in any way or by any means disparage the Company, the members of the Company's Board of Directors or the Company's officers and employees.

Definitions.

Definition of "Cause." For all purposes under this Agreement, "Cause" shall mean the Executive's unauthorized use or disclosure of trade secrets which causes material harm to the Company, the Executive's conviction of, or a plea of "guilty" or "no contest" to, a felony, or the Executive's gross misconduct.

Definition of "Change in Control." For all purposes under this Agreement, "Change in Control" shall mean:

The consummation of a merger or consolidation of the Company with or into another entity or any other corporate reorganization, if persons who were not stockholders of the Company immediately prior to such merger, consolidation or other reorganization own immediately after such merger, consolidation or other reorganization 50% or more of the voting power of the outstanding securities of each of (x) the continuing or surviving entity and (y) any direct or indirect parent corporation of such continuing or surviving entity;

The sale, transfer or other disposition of all or substantially all of the Company's assets;

A change in the composition of the Board, as a result of which fewer than 50% of the incumbent directors are directors who either (x) had been directors of the Company on the date 24 months prior to the date of the event that my constitute a Change in Control (the "***original directors***") or (y) were elected, or nominated for election, to the Board with the affirmative votes of at least a majority of the aggregate of the original directors who were still in office at the time of the election or nomination and the directors whose election or nomination was previously so approved; or

Any transaction as a result of which any person is the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), director or indirectly, of securities of the Company representing at least 50% of the total voting power represented by the Company's then outstanding voting securities. For purposes of this paragraph (iv), the term "person" shall have the same meaning as when used in sections 13(d) and 14(d) of the

Exchange Act but shall exclude (x) a trustee or other fiduciary holding securities under an employee benefit plan of the Company or of a Parent or Subsidiary and (y) a corporation owned directly or indirectly by the stockholder of the Company in substantially the same proportions as their ownership of the common stock of the Company.

A transaction shall not constitute a Change in Control if its sole purpose is to change the state of the Company's incorporation or to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction.

Definition of "Good Reason." For all purposes under this Agreement, "Good Reason" shall mean (i) a material diminution in the Executive's authority, duties or responsibilities, provided, however, if by virtue of the Company being acquired and made a division or business unit of a larger entity following a Change in Control, Executive retains substantially similar authority, duties or responsibilities for such division or business unit of the acquiring corporation but not for the entire acquiring corporation, such reduction in authority, duties or responsibilities shall not constitute Good Reason for purposes of this sub clause (c)(i); (ii) a 10% or greater reduction in his or her level of compensation, which will be determined based on an average of the Executive's annual Total Direct Compensation for the prior three calendar years or, if employed for fewer than three calendar years, for the number of years the Executive has been employed by the Company (referred to below as the "***look-back years***"); or (iii) a relocation of Executive's place of employment by more than 30 miles, provided and only if such change, reduction or relocation is effected by the Company without Executive's consent. For purposes of the foregoing, Total Direct Compensation means total target cash compensation (annual base salary plus target annual cash incentives). For the Executive to receive the benefits under this Agreement as a result of a voluntary resignation under this subsection (c), all of the following requirements must be satisfied: (1) the Executive must provide notice to the Company of his or her intent to assert Good Reason within 120 days of the initial existence of one or more of the conditions set forth in subclauses (i) through (iii); (2) the Company will have 30 days from the date of such notice to remedy the condition and, if it does so, the Executive may withdraw his or her resignation or may resign with no benefits; and (3) any termination of employment under this provision must occur within eighteen (18) months of the initial existence of one or more of the conditions set forth in subclauses (i) through (iii). Should the Company remedy the condition as set forth above and then one or more of the conditions arises again within twelve (12) months following the occurrence of a Change in Control, the Executive may assert Good Reason again subject to all of the conditions set forth herein.

Definition of "Qualifying Termination." For all purposes under this Agreement, "Qualifying Termination" shall mean a Separation resulting from (i) the Company's termination of the Executive's employment for any reason other than Cause within twelve (12) months after a Change in Control or (ii) the Executive's voluntary resignation of his or her employment for Good Reason between the date that is four (4) months following a Change in Control and the date that is twelve (12) months following a Change in Control, provided however, that the grounds for Good Reason may arise at any time within the twelve (12) months following the Change in Control.

Definition of Separation. For all purposes under this Agreement, "Separation" shall mean a "separation from service," as defined in the regulations under Section 409A of the Code.

Successors.

Company's Successors. The Company shall require any successor (whether direct or indirect and whether by purchase, lease, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets, by an agreement in substance and form satisfactory to the Executive, to assume this Agreement and to agree expressly to perform this Agreement in the same manner and to the same extent as the Company would be required to perform it in the absence of a succession. For all purposes under this Agreement, the term "Company" shall include any successor to the Company's business and/or assets or which becomes bound by this Agreement by operation of law.

Executive's Successors. This Agreement and all rights of the Executive hereunder shall inure to the benefit of, and be enforceable by, the Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

Golden Parachute Taxes

Best After-Tax Result. In the event that any payment or benefit received or to be received by Executive pursuant to this Agreement or otherwise ("***Payments***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code and (ii) but for this subsection (a), be subject to the excise tax imposed by Section 4999 of the Code, any successor provisions, or any comparable federal, state, local or foreign excise tax ("***Excise Tax***"), then, subject to the provisions of Section 6(b) hereof, such Payments shall be either (A) provided in full pursuant to the terms of this Agreement or any other applicable agreement, or (B) provided as to such lesser extent which would result in no portion of such Payments being subject to the Excise Tax ("***Reduced Amount***"), whichever of the foregoing amounts, taking into account the applicable federal, state, local and foreign income, employment and other taxes and the Excise Tax (including, without limitation, any interest or penalties on such taxes), results in the receipt by Executive, on an after-tax basis, of the greatest amount of payments and benefits provided for hereunder or otherwise, notwithstanding that all or some portion of such Payments may be subject to the Excise Tax. Unless the Company and Executive otherwise agree in writing, any determination required under this Section shall be made by independent tax counsel designated by the Company and reasonably acceptable to Executive ("***Independent Tax Counsel***"), whose determination shall be conclusive and binding upon Executive and the Company for all purposes. For purposes of making the calculations required under this Section, Independent Tax Counsel may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code; provided that Independent Tax Counsel shall assume that Executive pays all taxes at the highest marginal rate. The Company and Executive shall furnish to Independent Tax Counsel such information and documents as Independent Tax Counsel may reasonably request in order to make a determination under this Section. The Company shall bear all costs that Independent Tax Counsel may reasonably incur in connection with any calculations contemplated by this Section. In the event that Section 6(a)(ii)(B) above applies, then based on the information provided to the Company by Independent Tax Counsel, the Company shall reduce or eliminate the Payments in the following order, until the amounts payable or distributable to Executive equals the Reduced Amount: (i) reduction of cash payments; (ii) cancellation of accelerated vesting of equity awards other than stock options; (iii) cancellation of accelerated vesting of stock options; and (iv) reduction of other benefits paid to the Executive. In the event that acceleration of vesting is reduced, such acceleration of vesting shall be cancelled in the reverse order of date of grant of the Executive's equity awards. In the event that cash payments or other benefits are reduced, such reduction shall occur in reverse order beginning with payments or benefits which are to be paid the farthest in time from the date of Independent Tax Counsel's determination under this Section. If the Internal Revenue Service (the "***IRS***") determines that any Payment is subject to the Excise Tax, then Section 6(b) hereof shall apply, and the enforcement of Section 6(b) shall be the exclusive remedy to the Company.

(b) **Adjustments**. If, notwithstanding any reduction described in Section 6(a) hereof (or in the absence of any such reduction), the IRS determines that Executive is liable for the Excise Tax as a result of the receipt of one or more Payments, then Executive shall be obligated to surrender or pay back to the Company, within 120 days after a final IRS determination, an amount of such payments or benefits equal to the "Repayment Amount." The Repayment Amount with respect to such Payments shall be the smallest such amount, if any, as shall be required to be surrendered or paid to the Company so that Executive's net proceeds with respect to such Payments (after taking into account the payment of the Excise Tax imposed on such Payments) shall be maximized. Notwithstanding the foregoing, the Repayment Amount with respect to such Payments shall be zero if a Repayment Amount of more than zero would not eliminate the Excise Tax imposed on such Payments or if a Repayment Amount of more than zero would not maximize the net amount received by Executive from the Payments. If the Excise Tax is not eliminated pursuant to this Section 6(b), Executive shall pay the Excise Tax.

Miscellaneous Provisions.

Other Severance Arrangements. This Agreement supersedes any and all cash severance arrangements on change in control under any prior separation, severance and salary continuation arrangements, programs and plans which were previously offered by the Company to the Executive, including change in control severance arrangements pursuant to an employment agreement or offer letter. In no event shall any individual receive cash severance benefits under both this Agreement and any other severance pay or salary continuation program, plan or other arrangement with the Company.

Notice. Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered or when mailed by U.S. registered or certified mail, return receipt requested and postage prepaid or deposited with Federal Express Corporation, with shipping charges prepaid. In the case of the Executive, mailed notices shall be addressed to him or her at the home address which he or she most recently communicated to the Company in writing. In the case of the Company, mailed notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of its Secretary.

Waiver. No provision of this Agreement shall be modified, waived or discharged unless the modification, waiver or discharge is agreed to in writing and signed by the Executive and by an authorized officer of the Company (other than the Executive). No waiver by either party of any breach of, or of compliance with, any condition or provision of this Agreement by the other party shall be considered a waiver of any other condition or provision or of the same condition or provision at another time.

Withholding Taxes. All payments made under this Agreement shall be subject to reduction to reflect taxes or other charges required to be withheld by law.

Severability. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision hereof, which shall remain in full force and effect.

No Retention Rights. Nothing in this Agreement shall confer upon the Executive any right to continue in service for any period of specific duration or interfere with or otherwise restrict in any way the rights of the Company or any subsidiary of the Company or of the Executive, which rights are hereby expressly reserved by each, to terminate his or her service at any time and for any reason, with or without Cause.

Choice of Law. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of California (other than their choice-of-law provisions).

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of the Company by its duly authorized officer, as of the day and year first above written.

/s/ Jon Lin
Jon Lin

EQUINIX, INC.

/s/ Charles Meyers
By: Charles Meyers
Title: President & CEO

Exhibit 10.25

CHANGE IN CONTROL SEVERANCE AGREEMENT

THIS AGREEMENT is entered into as of August 1, 2022 (the "***Effective Date***") by and between Scott Crenshaw (the "***Executive***") and **EQUINIX, INC.**, a Delaware corporation (the "***Company***").

Term of Agreement.

Except to the extent renewed as set forth in this Section 1, this Agreement shall terminate the earlier of August 1, 2025 (the "***Expiration Date***") or the date the Executive's employment with the Company terminates for a reason other than a Qualifying Termination as described in Section 4(d); however, if a definitive agreement relating to a Change in Control has been signed by the Company on or before August 1, 2025, then this Agreement shall remain in effect through the earlier of:

The date the Executive's employment with the Company terminates for a reason other than a Qualifying Termination as described in Section 4(d); or

The date the Company has met all of its obligations under this Agreement following a termination of the Executive's employment with the Company for a reason described in Section 4(d).

This Agreement shall renew automatically and continue in effect for three-year periods measured from the initial Expiration Date, unless the Company provides Executive notice of non-renewal at least six months prior to the date on which this Agreement would otherwise expire.

Severance Payment.

Severance Benefit. If the Executive is subject to a Qualifying Termination, then the Company shall pay the Executive 200% of his or her annual base salary and target bonus (at the annual rate in effect immediately prior to the actions that resulted in the Qualifying Termination). The Executive will receive his or her severance payment in a cash lump-sum which will be made within ten (10) business days of the latest of the following dates:

the date of Executive's Qualifying Termination;

the date of the Company's receipt of the Executive's executed General Release; and

the expiration of any rescission period applicable to the Executive's executed General Release.

Health Care Benefit. If the Executive is subject to a Qualifying Termination, and if the Executive elects to continue his or her health insurance coverage under the Consolidated Omnibus Budget Reconciliation Act ("***COBRA***") following the termination of his or her employment, then the Company shall pay the Executive's monthly premium under COBRA until the earliest of (i) the close of the twenty four (24)-month period following cessation of his or her employment or (ii) the expiration of the Executive's continuation coverage under COBRA.

General Release. Any other provision of this Agreement notwithstanding, Subsections (a) and (b) above shall not apply unless the Executive (i) has executed a general release (in a form prescribed by the Company) of all known and unknown claims that he or she may then have against the Company or persons affiliated with the Company and (ii) has agreed not to prosecute any legal action or other proceeding based upon any of such claims. The release must be in the form prescribed by the Company, without alterations. The Company will deliver the form to the Executive within 30 days after the Executive's Separation. The Executive must execute and return the release within 21 days from receipt of the form.

Section 409A. For purposes of Section 409A of the Internal Revenue Code of 1986, as amended (the "***Code***"), if the Company determines that Executive is a "specified employee" under Section 409A(a)(2)(B)(i) of the Code at the time of a Separation, then (i) the severance benefits under Section 2(a), to the extent that they are subject to Section 409A of the Code, will commence during the seventh month after the Executive's Separation and (ii) any amounts that otherwise would have been paid during the first six months after a Separation will be paid in a lump sum on the earliest practicable date permitted by Section 409A(a)(2) of the Code. If a severance payment is considered deferred compensation under Code Section 409A, then the Executive will receive his or her severance payment in a cash lump-sum which will be made on the 60^{th} day following Executive's Termination (or, if such day is not a business day, on the first business day thereafter).

Covenants.

Non-Solicitation. During the Executive's employment with the Company and during the twelve-month period following his or her cessation of employment, the Executive shall not directly or indirectly, personally or through others, solicit or attempt to solicit the employment of any employee or consultant of the Company or any of the Company's affiliates, whether on the Executive's own behalf or on behalf of any other person or entity. The Executive and the Company agree that this provision is reasonably enforced as to any geographic area in which the Company conducts its business.

Non-Competition. The Executive agrees that, during his or her employment with the Company, he or she shall not engage in any other employment, consulting or other business activity (whether full-time or part-time) that would create a conflict of interest with the Company.

Cooperation and Non-Disparagement. The Executive agrees that, during the twelve-month period following his or her cessation of employment, he or she shall cooperate with the Company in every reasonable respect and shall use his or her best efforts to assist the Company with the transition of Executive's duties to his or her successor. The Executive further agrees that, during this twelve-month period, he or she shall not in any way or by any means disparage the Company, the members of the Company's Board of Directors or the Company's officers and employees.

Definitions.

Definition of "Cause." For all purposes under this Agreement, "Cause" shall mean the Executive's unauthorized use or disclosure of trade secrets which causes material harm to the Company, the Executive's conviction of, or a plea of "guilty" or "no contest" to, a felony, or the Executive's gross misconduct.

Definition of "Change in Control." For all purposes under this Agreement, "Change in Control" shall mean:

The consummation of a merger or consolidation of the Company with or into another entity or any other corporate reorganization, if persons who were not stockholders of the Company immediately prior to such merger, consolidation or other reorganization own immediately after such merger, consolidation or other reorganization 50% or more of the voting power of the outstanding securities of each of (x) the continuing or surviving entity and (y) any direct or indirect parent corporation of such continuing or surviving entity;

The sale, transfer or other disposition of all or substantially all of the Company's assets;

A change in the composition of the Board, as a result of which fewer than 50% of the incumbent directors are directors who either (x) had been directors of the Company on the date 24 months prior to the date of the event that my constitute a Change in Control (the "***original directors***") or (y) were elected, or nominated for election, to the Board with the affirmative votes of at least a majority of the aggregate of the original directors who were still in office at the time of the election or nomination and the directors whose election or nomination was previously so approved; or

Any transaction as a result of which any person is the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), director or indirectly, of securities of the Company representing at least 50% of the total voting power represented by the Company's then outstanding voting securities. For purposes of this paragraph (iv), the term "person" shall have the same meaning as when used in sections 13(d) and 14(d) of the

Exchange Act but shall exclude (x) a trustee or other fiduciary holding securities under an employee benefit plan of the Company or of a Parent or Subsidiary and (y) a corporation owned directly or indirectly by the stockholder of the Company in substantially the same proportions as their ownership of the common stock of the Company.

A transaction shall not constitute a Change in Control if its sole purpose is to change the state of the Company's incorporation or to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction.

Definition of "Good Reason." For all purposes under this Agreement, "Good Reason" shall mean (i) a material diminution in the Executive's authority, duties or responsibilities, provided, however, if by virtue of the Company being acquired and made a division or business unit of a larger entity following a Change in Control, Executive retains substantially similar authority, duties or responsibilities for such division or business unit of the acquiring corporation but not for the entire acquiring corporation, such reduction in authority, duties or responsibilities shall not constitute Good Reason for purposes of this sub clause (c)(i); (ii) a 10% or greater reduction in his or her level of compensation, which will be determined based on an average of the Executive's annual Total Direct Compensation for the prior three calendar years or, if employed for fewer than three calendar years, for the number of years the Executive has been employed by the Company (referred to below as the "***look-back years***"); or (iii) a relocation of Executive's place of employment by more than 30 miles, provided and only if such change, reduction or relocation is effected by the Company without Executive's consent. For purposes of the foregoing, Total Direct Compensation means total target cash compensation (annual base salary plus target annual cash incentives). For the Executive to receive the benefits under this Agreement as a result of a voluntary resignation under this subsection (c), all of the following requirements must be satisfied: (1) the Executive must provide notice to the Company of his or her intent to assert Good Reason within 120 days of the initial existence of one or more of the conditions set forth in subclauses (i) through (iii); (2) the Company will have 30 days from the date of such notice to remedy the condition and, if it does so, the Executive may withdraw his or her resignation or may resign with no benefits; and (3) any termination of employment under this provision must occur within eighteen (18) months of the initial existence of one or more of the conditions set forth in subclauses (i) through (iii). Should the Company remedy the condition as set forth above and then one or more of the conditions arises again within twelve (12) months following the occurrence of a Change in Control, the Executive may assert Good Reason again subject to all of the conditions set forth herein.

Definition of "Qualifying Termination." For all purposes under this Agreement, "Qualifying Termination" shall mean a Separation resulting from (i) the Company's termination of the Executive's employment for any reason other than Cause within twelve (12) months after a Change in Control or (ii) the Executive's voluntary resignation of his or her employment for Good Reason between the date that is four (4) months following a Change in Control and the date that is twelve (12) months following a Change in Control, provided however, that the grounds for Good Reason may arise at any time within the twelve (12) months following the Change in Control.

Definition of Separation. For all purposes under this Agreement, "Separation" shall mean a "separation from service," as defined in the regulations under Section 409A of the Code.

Successors.

Company's Successors. The Company shall require any successor (whether direct or indirect and whether by purchase, lease, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets, by an agreement in substance and form satisfactory to the Executive, to assume this Agreement and to agree expressly to perform this Agreement in the same manner and to the same extent as the Company would be required to perform it in the absence of a succession. For all purposes under this Agreement, the term "Company" shall include any successor to the Company's business and/or assets or which becomes bound by this Agreement by operation of law.

Executive's Successors. This Agreement and all rights of the Executive hereunder shall inure to the benefit of, and be enforceable by, the Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

Golden Parachute Taxes

Best After-Tax Result. In the event that any payment or benefit received or to be received by Executive pursuant to this Agreement or otherwise ("***Payments***") would (i) constitute a "parachute payment" within the meaning of Section 280G of the Code and (ii) but for this subsection (a), be subject to the excise tax imposed by Section 4999 of the Code, any successor provisions, or any comparable federal, state, local or foreign excise tax ("***Excise Tax***"), then, subject to the provisions of Section 6(b) hereof, such Payments shall be either (A) provided in full pursuant to the terms of this Agreement or any other applicable agreement, or (B) provided as to such lesser extent which would result in no portion of such Payments being subject to the Excise Tax ("***Reduced Amount***"), whichever of the foregoing amounts, taking into account the applicable federal, state, local and foreign income, employment and other taxes and the Excise Tax (including, without limitation, any interest or penalties on such taxes), results in the receipt by Executive, on an after-tax basis, of the greatest amount of payments and benefits provided for hereunder or otherwise, notwithstanding that all or some portion of such Payments may be subject to the Excise Tax. Unless the Company and Executive otherwise agree in writing, any determination required under this Section shall be made by independent tax counsel designated by the Company and reasonably acceptable to Executive ("***Independent Tax Counsel***"), whose determination shall be conclusive and binding upon Executive and the Company for all purposes. For purposes of making the calculations required under this Section, Independent Tax Counsel may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code; provided that Independent Tax Counsel shall assume that Executive pays all taxes at the highest marginal rate. The Company and Executive shall furnish to Independent Tax Counsel such information and documents as Independent Tax Counsel may reasonably request in order to make a determination under this Section. The Company shall bear all costs that Independent Tax Counsel may reasonably incur in connection with any calculations contemplated by this Section. In the event that Section 6(a)(ii)(B) above applies, then based on the information provided to the Company by Independent Tax Counsel, the Company shall reduce or eliminate the Payments in the following order, until the amounts payable or distributable to Executive equals the Reduced Amount: (i) reduction of cash payments; (ii) cancellation of accelerated vesting of equity awards other than stock options; (iii) cancellation of accelerated vesting of stock options; and (iv) reduction of other benefits paid to the Executive. In the event that acceleration of vesting is reduced, such acceleration of vesting shall be cancelled in the reverse order of date of grant of the Executive's equity awards. In the event that cash payments or other benefits are reduced, such reduction shall occur in reverse order beginning with payments or benefits which are to be paid the farthest in time from the date of Independent Tax Counsel's determination under this Section. If the Internal Revenue Service (the "***IRS***") determines that any Payment is subject to the Excise Tax, then Section 6(b) hereof shall apply, and the enforcement of Section 6(b) shall be the exclusive remedy to the Company.

(b) **Adjustments**. If, notwithstanding any reduction described in Section 6(a) hereof (or in the absence of any such reduction), the IRS determines that Executive is liable for the Excise Tax as a result of the receipt of one or more Payments, then Executive shall be obligated to surrender or pay back to the Company, within 120 days after a final IRS determination, an amount of such payments or benefits equal to the "Repayment Amount." The Repayment Amount with respect to such Payments shall be the smallest such amount, if any, as shall be required to be surrendered or paid to the Company so that Executive's net proceeds with respect to such Payments (after taking into account the payment of the Excise Tax imposed on such Payments) shall be maximized. Notwithstanding the foregoing, the Repayment Amount with respect to such Payments shall be zero if a Repayment Amount of more than zero would not eliminate the Excise Tax imposed on such Payments or if a Repayment Amount of more than zero would not maximize the net amount received by Executive from the Payments. If the Excise Tax is not eliminated pursuant to this Section 6(b), Executive shall pay the Excise Tax.

Miscellaneous Provisions.

Other Severance Arrangements. This Agreement supersedes any and all cash severance arrangements on change in control under any prior separation, severance and salary continuation arrangements, programs and plans which were previously offered by the Company to the Executive, including change in control severance arrangements pursuant to an employment agreement or offer letter. In no event shall any individual receive cash severance benefits under both this Agreement and any other severance pay or salary continuation program, plan or other arrangement with the Company.

Notice. Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered or when mailed by U.S. registered or certified mail, return receipt requested and postage prepaid or deposited with Federal Express Corporation, with shipping charges prepaid. In the case of the Executive, mailed notices shall be addressed to him or her at the home address which he or she most recently communicated to the Company in writing. In the case of the Company, mailed notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of its Secretary.

Waiver. No provision of this Agreement shall be modified, waived or discharged unless the modification, waiver or discharge is agreed to in writing and signed by the Executive and by an authorized officer of the Company (other than the Executive). No waiver by either party of any breach of, or of compliance with, any condition or provision of this Agreement by the other party shall be considered a waiver of any other condition or provision or of the same condition or provision at another time.

Withholding Taxes. All payments made under this Agreement shall be subject to reduction to reflect taxes or other charges required to be withheld by law.

Severability. The invalidity or unenforceability of any provision or provisions of this Agreement shall not affect the validity or enforceability of any other provision hereof, which shall remain in full force and effect.

No Retention Rights. Nothing in this Agreement shall confer upon the Executive any right to continue in service for any period of specific duration or interfere with or otherwise restrict in any way the rights of the Company or any subsidiary of the Company or of the Executive, which rights are hereby expressly reserved by each, to terminate his or her service at any time and for any reason, with or without Cause.

Choice of Law. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of California (other than their choice-of-law provisions).

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of the Company by its duly authorized officer, as of the day and year first above written.

/s/ Scott Crenshaw
Scott Crenshaw

EQUINIX, INC.

/s/ Charles Meyers
By: Charles Meyers
Title: President & CEO

Exhibit 21.1

Subsidiaries of Equinix, Inc.

Entity	Jurisdiction
Equinix Canada Holdings Limited	British Colombia, Canada
Equinix (Australia) Enterprises Pty Limited	Australia
Equinix Australia Pty Limited	Australia
McLaren Pty Limited	Australia
Metronode (ACT) Pty Limited	Australia
Metronode (NSW) Pty Limited	Australia
Metronode C1 Pty Limited	Australia
Metronode Group Pty Limited	Australia
Metronode Investments Pty Limited	Australia
Metronode M2 Pty Ltd	Australia
Metronode P2 Pty Limited	Australia
MGH Pegasus Pty Ltd	Australia
Equinix Australia National Pty Ltd	Australia
Metronode S2 Pty Ltd	Australia
Metronode New Zealand Limited	New Zealand
MGH Bidco Pty Limited	Australia
MGH Finco Pty Limited	Australia
MGH Holdco Pty Ltd	Australia
McLaren Unit Trust	Australia
Equinix South America Holdings, LLC	Delaware, U.S.
Equinix do Brasil Soluções de Tecnologia em Informática Ltda.	Brazil
Equinix do Brasil Telecomunicações Ltda.	Brazil
Equinix Colombia, Inc. Pte. Ltd.	Singapore
Equinix (Bulgaria) Data Centers EOOD	Bulgaria
Equinix (Canada) Enterprises Ltd.	Ontario, Canada
Equinix Canada Ltd.	Ontario, Canada
CHI 3, LLC	Delaware, U.S.
Equinix (EMEA) Management, Inc.	Delaware, U.S.
Equinix (US) Enterprises, Inc.	Delaware, U.S.
Equinix LLC	Delaware, U.S.
Equinix Pacific LLC	Delaware, U.S.
Equinix Professional Services, Inc	Delaware, U.S.
Equinix Government Solutions LLC	Delaware, U.S.
Equinix RP II LLC	Delaware, U.S.
Moran Road Partners, LLC	Delaware, U.S.
Infomart Dallas GP, LLC	Delaware, U.S.
Infomart Dallas, LP	Delaware, U.S.
LA4, LLC	Delaware, U.S.
NY2 Hartz Way, LLC	Delaware, U.S.

Entity	Jurisdiction
Equinix (Velocity) Holding Company	Delaware, U.S.
SV1, LLC	Delaware, U.S.
Switch & Data Facilities Company LLC	Delaware, U.S.
Switch & Data LLC	Delaware, U.S.
Switch & Data MA One LLC	Delaware, U.S.
Switch & Data WA One LLC	Delaware, U.S.
Switch and Data NJ Two LLC	Delaware, U.S.
Switch and Data Operating Company LLC	Delaware, U.S.
CHI 3 Procurement, LLC	Illinois, U.S.
VDC I, LLC	Delaware, U.S.
VDC V, LLC	Delaware, U.S.
CHI 8, LLC	Delaware, U.S.
Equinix Hyperscale (LP) LLC	Delaware, U.S.
Equinix Hyperscale (GP) LLC	Delaware, U.S.
Equinix Services, Inc.	Delaware, U.S.
PacketHost, Inc.	Philippines
Equinix Montreal Ltd.	Ontario, Canada
Equinix (Finland) Enterprises Oy	Finland
Equinix (Finland) Oy	Finland
Equinix (France) Enterprises SAS	France
Equinix (Real Estate) Holdings SC	France
Equinix (Real Estate) SCI	France
Equinix France SAS	France
Equinix (Germany) Enterprises GmbH	Germany
Equinix (Germany) GmbH	Germany
Equinix (Real Estate) GmbH	Germany
Upminster GmbH	Germany
Equinix Hyperscale 1 (FR9) GmbH	Germany
Equinix Hyperscale 1 (FR11) GmbH	Germany
Equinix Hyperscale 1 (FR9) Enterprises GmbH	Germany
Equinix Hyperscale 1 (FR11) Enterprises GmbH	Germany
Equinix (Hong Kong) Enterprises Limited	Hong Kong
Equinix Hong Kong Limited	Hong Kong
Equinix (Ireland) Enterprises Limited	Ireland
Equinix (Ireland) Limited	Ireland
Equinix (Italia) Enterprises S.r.l.	Italy
Equinix Italia S.r.l.	Italy
Equinix (Japan) Enterprises K.K.	Japan
Equinix (Japan) Technology Services K.K.	Japan
Equinix Japan K.K (in Kanji)	Japan
Equinix Muscat LLC	Oman
Equinix Middle East Services LLC	Oman

Entity	**Jurisdiction**
Equinix (China) Investment Holding Co., Ltd. (亿利互连(中国)投资有限公司)	People’s Republic of China
Equinix Information Technology (Shanghai) Co., Ltd. (亿利互连信息技术（上海）有限公司)	People’s Republic of China
Equinix WGQ Information Technology (Shanghai) Co., Ltd. (亿利互连(上海)通讯科技有限公司)	People’s Republic of China
Equinix YP Information Technology (Shanghai) Co., Ltd. (亿利互连数据系统(上海)有限公司)	People’s Republic of China
Gaohong Equinix (Shanghai) Information Technology Co., Ltd (高鸿亿利(上海)信息技术有限公司)	People’s Republic of China
Equinix India Private Limited	India
GPX India Private Limited	India
GPX India II Private Limited	India
GPX India Services Private Limited	India
Equinix (Poland) Technology Services sp. z o.o.	Poland
Equinix (Poland) Enterprises sp. z o.o.	Poland
Equinix (Poland) sp. z o.o.	Poland
Equinix (EMEA) Services B.V.	Netherlands
Equinix (Portugal) Data Centers, S.A.	Portugal
Equinix II (Portugal) Enterprises Data Centers, Unipessoal Lda	Portugal
Equinix Korea LLC	Republic of Korea
Equinix (Singapore) Enterprises Pte. Ltd.	Singapore
Equinix Asia Pacific Holdings Pte. Ltd.	Singapore
Equinix Asia Pacific Pte. Ltd.	Singapore
Equinix Singapore Holdings Pte. Ltd.	Singapore
Equinix Singapore Pte. Ltd.	Singapore
Equinix (Spain) Enterprises, S.L.U.	Spain
Equinix (Spain), S.A.U.	Spain
Equinix (Sweden) AB	Sweden
Equinix (Sweden) Enterprises AB	Sweden
Equinix (Switzerland) Enterprises GmbH	Switzerland
Equinix (Switzerland) GmbH	Switzerland
EMEA Hyperscale 1 C.V.	Netherlands
Equinix Hyperscale 1 Holdings B.V.	Netherlands
Equinix (EMEA) Acquisition Enterprises B.V.	Netherlands
Equinix (EMEA) B.V.	Netherlands
Equinix (Netherlands) B.V.	Netherlands
Equinix (Netherlands) Enterprises B.V.	Netherlands
Equinix (Netherlands) Holdings B.V.	Netherlands
Virtu Secure Webservices B.V.	Netherlands
Tussenlanen B.V.	Netherlands
Equinix (EMEA) Hyperscale Services B.V.	Netherlands
Equinix Turkey Data Merkezi Üretim Inşaat Sanayi ve Ticaret Anonim Şirketi	Turkey

Entity	**Jurisdiction**
Equinix Turkey Enterprises Data Merkezi Üretim Inşaat Sanayi ve Ticaret Anonim Şirketi	Turkey
Equinix Middle East FZ-LLC	United Arab Emirates
Equinix Hyperscale 1 (LD11) Ltd	United Kingdom
Equinix (Services) Limited	United Kingdom
Equinix (UK) Enterprises Ltd	United Kingdom
Equinix (UK) Limited	United Kingdom
Equinix Hyperscale 1 (France) Holdings SAS	France
Equinix Hyperscale 1 (PA9) SAS	France
Equinix Hyperscale 1 (PA8) SAS	France
Equinix Hyperscale 1 (UK) Financing Limited	United Kingdom
Equinix Hyperscale 1 (LD13) Limited	United Kingdom
Equinix Hyperscale 1 (DB5) Limited	Ireland
Equinix Hyperscale 1 (DB5) Enterprises Limited	Ireland
Equinix Hyperscale 2 (ML7) S.r.l	Italy
Equinix (MA5) Limited	United Kingdom
Equinix (Poland) Services sp. z o.o	Poland
Equinix (PA-C) SAS	France
Equinix Mexico Holdings, S. de R.L. de C.V.	Mexico
Equinix MX Sales, S. de R.L. de C.V.	Mexico
Equinix Queretaro, S. de R.L. de C.V.	Mexico
Equinix MX Services, S.A. de C.V.	Mexico
Contrato de Fideicomiso Revocable de Administración de Bienes Inmuebles número “CIB/3714”	Mexico
Contrato de Fideicomiso Irrevocable de Administración Número “CIB/3933”	Mexico
Equinix APAC 1 Hyperscale Holdings 1 Pte. Ltd.	Singapore
Equinix APAC 1 Hyperscale Holdings 2 Pte. Ltd.	Singapore
Equinix Hyperscale 1 GK	Japan
Equinix Hyperscale 1 (TY12) GK	Japan
Equinix Hyperscale 1 (TY12) Enterprises GK	Japan
Equinix Hyperscale 1 (TY14) GK	Japan
Equinix Hyperscale 1 (OS2) GK	Japan
Equinix Hyperscale 1 (OS2) Enterprises GK	Japan
Equinix Hyperscale 2 (FR10) GmbH	Germany
Equinix Hyperscale 2 (SK5) AB	Sweden
Equinix Hyperscale 1 (Japan) TMK	Japan
Equinix Hyperscale 2 (FR16) GmbH	Germany
Equinix Hyperscale 2 (PA12) SAS	France
Equinix Hyperscale 2 (PA13) SAS	France
Equinix Hyperscale (GP) Pte. Ltd.	Singapore
Equinix APAC Hyperscale 1 (LP) LLC	Delaware, U.S.
Equinix (APAC) Hyperscale Services Pte Ltd	Singapore
APAC 1 Hyperscale LP	Singapore

Entity	Jurisdiction
Equinix APAC 1 Hyperscale Holdings Pte. Ltd.	Singapore
Equinix APAC Hyperscale 2 (LP), LLC	Delaware, U.S.
Equinix Hyperscale 2 (GP) LLC	Delaware, U.S.
Equinix Hyperscale 2 (LP) LLC	Delaware, U.S.
Equinix Australia Real Estate Pty Ltd	Australia
Equinix APAC Hyperscale 2 (GP) Pte. Ltd.	Singapore
APAC Hyperscale 2 LP	Singapore
Equinix APAC Hyperscale 2 Holdings 1 Pte. Ltd.	Singapore
Equinix APAC Hyperscale 2 Holdings 2 Pte. Ltd.	Singapore
Equinix Hyperscale 2 (SY9) Pty Limited	Australia
Equinix Hyperscale 2 (SY10) Pty Limited	Australia
Equinix Hyperscale 2 (Australia) Enterprises 1 Pty Limited	Australia
Equinix Hyperscale 2 (Australia) Enterprises 2 Pty Limited	Australia
Equinix Saudi for Information Technology LLC	Saudi Arabia
Equinix Hyperscale 2 (WA4) sp. z o.o.	Poland
Equinix Hyperscale 2 IL5 Data Merkezi Uretim Insaat Sanayi Ve Ticaret Limited Sirketi	Turkey
Equinix Hyperscale 1 (Turkey) Holdings B.V.	Netherlands
EMEA Hyperscale 2 C.V.	Netherlands
Equinix Hyperscale 1 IL2 Data Merkezi Üretim İnşaat Sanayi ve Ticaret Limited Şirketi	Turkey
Equinix Hyperscale 2 (MD3) S.L.	Spain
Equinix Hyperscale 1 (LD11) Enterprises Limited	United Kingdom
Equinix Hyperscale 2 (LDx) Limited	United Kingdom
Equinix Hyperscale 2 Finco A B.V.	Netherlands
Equinix Hyperscale 2 Finco B B.V.	Netherlands
Equinix Hyperscale 2 (SP5) LTDA	Brazil
Equinix Hyperscale 2 (SP7) LTDA	Brazil
Equinix Hyperscale 2 (SP5) Enterprises LTDA	Brazil
Equinix Hyperscale 2 (France) Holdings B.V	Netherlands
PT Equinix Indonesia JKT	Indonesia
Equinix Hyperscale 2 Holdings B.V.	Netherlands
Equinix Hyperscale 2 Holdings 2 B.V.	Netherlands
Equinix Hyperscale 2 Holdings A B.V.	Netherlands
Equinix Hyperscale 2 Holdings B B.V.	Netherlands
Equinix Hyperscale 2 Holdings C B.V.	Netherlands
Equinix Hyperscale 2 Holdings D B.V.	Netherlands
Equinix Colombia, Inc. Pte. Ltd. Sucursal Colombia	Colombia
Equinix (APAC) Services Pte. Ltd.	Singapore
Equinix Africa Investment LLC	Delaware, U.S.
Equinix (West Africa) Acquisition Holdings B.V.	Netherlands
Equinix (West Africa) Acquisition Enterprises B.V.	Netherlands
Equinix Colombia (BG3) S.A.S	Colombia
Equinix Security LLC	Delaware, U.S.
Equinix India Professional Services Private Limited	India

Entity	Jurisdiction
Equinix Hyperscale 2 (AM12) B.V.	Netherlands
Equinix Chile SpA	Chile
Equinix Chile Enterprises SpA	Chile
Equinix Peru S.R.L.	Peru
Equinix APAC Hyperscale 3 (GP) Pte. Ltd.	Singapore
Equinix Hyperscale 2 (MD3) Enterprises SLU	Spain
Equinix Hyperscale 2 (ML9) S.r.l.	Italy
Equinix Hyperscale 2 (HE10) Oy	Finland
Equinix Hyperscale 2 (HE10) Enterprises Oy	Finland
MainOne Cable Company Ltd	Mauritius
MainOne Cable Company Nigeria Limited	Nigeria
Infraco Nigeria Limited	Nigeria
MainData Nigeria Limited	Nigeria
MainOne Cable Company Ghana Ltd	Ghana
MainData Ghana Ltd	Ghana
MainOne Cote D'Ivoire	Ivory Coast
MainOne Cable Company Portugal, S.A.	Portugal
MainData Cote D'Ivoire	Ivory Coast
FibreAcess Nigeria Limited	Nigeria
MainOne Company Nigeria LFZ Enterprise	Nigeria
Maintecknosoft Ltd	Ghana
Equinix Hyperscale 2 (FR10) Enterprises GmbH	Germany
Equinix Hyperscale 2 (FR16) Enterprises GmbH	Germany
APAC Hyperscale 3 Private Limited	Singapore
Capitaland Korea No.8 Qualified Private Real Estate Investment Company	Republic of Korea
Capitaland Korea No.9 Qualified Private Real Estate Investment Company	Republic of Korea
Equinix APAC Hyperscale 3 LP	Singapore
Equinix Hyperscale 3 (SL2) LLC	Republic of Korea
Equinix Hyperscale 3 (SL3) LLC	Republic of Korea
Equinix Korea Holdings LLC	Republic of Korea
Equinix (Singapore) Realty Services Pte. Ltd.	Singapore
Equinix (UK) Realty Services Limited	United Kingdom
Equinix Malaysia Sdn Bhd	Malaysia
PT Equinix Indonesia Hldgs	Indonesia
Equinix Security (CU1) LLC	Delaware, U.S.
Equinix Southeast Asia Enterprises Pte. Ltd.	Singapore
Equinix South Africa (Pty) Ltd.	South Africa
Equinix (LD-A) Limited	Jersey, United Kingdom
Equinix Hyperscale 2 (AM12) B.V.	Netherlands
Equinix Hyperscale 2 (PA12) Enterprises SAS	France
Equinix Hyperscale 2 (PA13) Enterprises SAS	France

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-3 (No. 333-221380) and Form S-8 (Nos. 333-45280, 333- 58074, 333-71870, 333-85202, 333-104078, 333-113765, 333-117892, 333-122142, 333-132466, 333-140946, 333-149452, 333-157545, 333-165033, 333-166581, 333-172447, 333-179677, 333-186873, 333-194229) of Equinix, Inc. of our report dated February 17, 2023 relating to the financial statements, financial statement schedule and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
San Jose, California
February 17, 2023

Exhibit 31.1

CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Charles Meyers, certify that:

1. I have reviewed this annual report on Form 10-K of Equinix, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

/s/ Charles Meyers

Charles Meyers
Chief Executive Officer and President

Dated: February 17, 2023

Exhibit 31.2

**CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Keith D. Taylor, certify that:

1. I have reviewed this annual report on Form 10-K of Equinix, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Keith D. Taylor

Keith D. Taylor
Chief Financial Officer

Dated: February 17, 2023

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Equinix, Inc. (the “Company”) on Form 10-K for the period ending December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Charles Meyers, Chief Executive Officer and President of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ Charles Meyers

Charles Meyers
Chief Executive Officer and President

February 17, 2023

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Equinix, Inc. (the “Company”) on Form 10-K for the period ending December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Keith D. Taylor, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ Keith D. Taylor

Keith D. Taylor
Chief Financial Officer
February 17, 2023