Letter from the CEO

Amidst the challenging circumstances created by COVID-19, a silver lining has been the realization that data helps bring the world together. In many ways, the role of data centers as critical to the on-going success of the broader economy has been highlighted – in both today’s remote environment and even as we consider what the world will look like when we return to our respective offices. Along with the increased emphasis on data center capabilities, we are also recognizing a heightened responsibility of our industry to our collective families and communities and to the planet itself.

Our mission at CyrusOne is simply to help our customers, whether that means enabling hyperscalers to deliver their services to end-users as part of their global logistical fabric or allowing enterprises to efficiently and easily stitch together the critical IT resources necessary to ensure their success. As part of that mission, we look beyond the horizon and help develop creative solutions so our customers can change the world, not just for today, but also to help build a sustainable future. As the saying goes, “change comes from within,” and as a Certified Best Place to Work, we know we can only succeed in our mission by fostering an inclusive, diverse, and sustainable workplace.

At CyrusOne, we believe our sustainability mission stands on three pillars:

- **Responsibility to the environment.** We are committed to leading our industry in the efficient consumption and preservation of critical resources, such as water and energy. Through creative data center design and implementation, programmatic inclusion of renewable resources, and operational excellence, we have and will continue to make revolutionary strides in resource management.

- **Responsibility to the community.** At CyrusOne, we have always had a serious commitment to building a diverse and empowered workforce. In today’s environment, we see an opportunity to renew our sense of purpose in this regard by focusing on creating a team that includes a breadth of people from different backgrounds, ethnicities, and cultures. We are reaffirming our commitment to hire candidates who allow us to deliver on our diversity goals – and extending those goals to our closest partners in terms of equipment vendors and other service providers.

- **Responsibility to our stakeholders.** Organizationally, we are committed to living up to the highest standards of character and integrity. In this regard, we continue to refine our governance and compensation plans to ensure that our internal incentives completely align with the goals and objectives our shareholders and other critical stakeholders.

In the following pages, you will read through our first-ever sustainability report. Change is a journey and not a destination, and our first sustainability report will serve as a roadmap in the days and years ahead. I am excited to take this journey with you.

Bruce W. Duncan
President, Chief Executive Officer and Member of the Board of Directors
Chapter 1 **Introduction**

**About This Report**
Published in October 2020, this report represents the best available information at the time of publishing. This report has been prepared based on GRI standardized metrics, which are presented in “Chapter 9: Appendix 2 Standardized Metrics”. We focus on projects from 2019, though we occasionally include highlight stories from 2020 where relevant. This report was formally reviewed and overseen by our Board of Directors, our CEO, and our senior management team in collaboration with our Sustainability Working Group. For more information on sustainability programs at CyrusOne, visit the [CyrusOne sustainability website](https://www.CyrusOne.com).

**Where We Operate**
We provide mission-critical data center facilities that protect and ensure the continued operation of IT infrastructure for approximately 1,000 customers, including approximately 200 Fortune 1000 companies. CyrusOne offers a tailored, customer-service-focused platform and is committed to full transparency in communication, management, and service delivery throughout its more than 50 data centers worldwide, which are located primarily in the US and Europe as shown in the maps to the right. Additional information about CyrusOne can be found at [www.CyrusOne.com](http://www.CyrusOne.com).
Meeting Third-Party Standards

This report has been designed to provide disclosure compatible with three third-party standards.

Taskforce for Climate-related Financial Disclosures (TCFD) Recommendations

As part of our commitment to meeting the recommendations of the TCFD, we have structured this report around four recommended topics: Governance, Strategy, Risk Management, and Metrics and Targets.

- **Governance** is common across Environmental, Social, and Governance topics, so it is addressed once in “Chapter 2: Management Approach”.
- **Strategy** is provided at three different scales: Our company-wide strategy is described in “Chapter 2: Management Approach”. Then in each of the topic-focused chapters (Chapters 4-6) we provide our overall strategy for that topic (e.g. Energy and Carbon) as well as specific strategies for its subtopics (e.g. Energy Efficient Building Design, Energy Efficient Operations).
- **Risk Management** is similarly provided in both the company-wide scale in “Chapter 2: Management Approach” and in each of the topic-focused chapters, where we describe our risk management for that topic (e.g. Energy and Carbon).
- **Metrics and Targets** are detailed in two places. Our primary metrics are detailed in each of the topic-focused chapters. These are the metrics that we find most helpful in understanding our progress. Additional detail about these metrics is provided in “Chapter 9: Summary, Appendix 1 Primary Metrics”. Our standardized metrics, following the guidance of TCFD, GRI, and SASB, are listed in “Chapter 9: Summary, Appendix 2 Standardized Metrics”.

Global Reporting Initiative (GRI) Standards

To provide transparency, we have prepared this report to GRI standards:

- **Materiality** assessment is based on guidance from the GRI 101 Foundation, using the dimensions of importance to stakeholders and impact on the environment (we will include economic and social impacts in later years).
- **Management Approach Disclosures** for material issues are detailed on a company-wide basis in “Chapter 2: Management Approach”. Then in each of the topic-focused chapters we discuss our management approach for that topic (e.g. Energy and Carbon) as well as specific approaches for its subtopics (e.g. Energy Efficient Building Design, Energy Efficient Operations).
- **Topic-Specific Disclosures** for material issues are included, along with other standardized metrics from TCFD and SASB, in “Chapter 9: Summary, Appendix 2 Standardized Metrics”. They are labeled with the GRI disclosure numbering system for ease of reference.

Sustainability Accounting Standards Board (SASB) Guidance

To benefit from the SASB guidance, we have included all relevant recommended metrics from our assigned category, Real Estate (IF-RE). However, since this Real Estate standard is not specific to data centers, we also referenced relevant guidance and metrics for the Internet Media & Services standard (TC-IM). It is our hope that this combination of metrics will provide a more useful picture for our customers and investors. Our standardized SASB metrics, along with metrics from TCFD and GRI, are listed in “Chapter 9: Summary, Appendix 2 Standardized Metrics”.

Though not specifically addressed by the TCFD, we continue this four-subject pattern to additional topics of water conservation and habitat.
Chapter 2 Management Approach

This chapter introduces our approach to managing and overseeing Environmental, Social, and Governance (ESG) issues, opportunities, and risks. It provides an overview of our organization’s governance structure, including strategy, risk management, and how we manage metrics and targets. Building on this, each of the following chapters further details strategy, risk management, and metrics and targets for specific topics.

ESG Governance

CyrusOne is committed to institutional integrity and ethics throughout our organization. One of the key functions of our Board of Directors (the “Board”) is the independent and informed oversight of our strategy and enterprise risk management. The Board administers this oversight function directly, with support from other standing committees of the Board, each of which addresses risks specific to its respective areas of oversight. In particular, among other things, the Audit Committee oversees our major financial and regulatory risk exposures and the steps our management has taken to identify, assess, monitor, and mitigate these exposures, including the process by which risk assessment and management is undertaken. The Audit Committee also oversees and monitors management’s compliance with the Company’s code of business conduct and ethics and the Company’s ethics and compliance reporting helpline. The Compensation Committee oversees management performance, succession planning, and compensation, including annual and long-term performance goals. The Nominating and Corporate Governance Committee monitors the effectiveness of our corporate governance guidelines, trends in governance (Governance Committee), Committee and Board composition and diversity, and provides oversight on ESG matters.

Responsibility for oversight and management of environmental and social issues occurs at multiple levels within the company. Building on this, each of the following chapters further details strategy, risk management, and metrics and targets for specific topics.

Board Oversight

At this stage in our sustainability journey, topics are reported primarily to the Governance Committee, which provides oversight and represents the needs of shareholders. The Governance Committee makes requests for specific topics and strategies to the senior leadership team and then reviews the results in their meetings.

Senior Management Direction

The Senior Management Team sets direction affecting the whole company. Since many environmental topics are related to operations within the company, the Operations Management Team has a lead role in most decisions regarding energy use, water efficiency, and sourcing.

Cross-functional Integration and Coordination

Cross-functional integration and coordination on sustainability strategies are achieved through the Sustainability Working Group. This group brings together directors from the departments with greatest impact on sustainability: Project Development, Design Engineering, Energy Procurement, Construction, Commissioning, Operations, Environmental Health & Safety, Sales, Marketing, Investor Relations, HR, Legal, and Governance. By working across departments and sharing best practices, we take an integrated approach to embedding sustainability in foundational decision making on a holistic basis. This allows us to manage risks and to create opportunities across the company, rather than this task being restricted to a single department.
Strategy

Vision Statement
At CyrusOne, we recognize that building and operating data centers leads to a geographic concentration of environmental impacts, even if the total impact is reduced compared to inefficiencies of smaller data rooms. Being a leader in this industry means embracing our responsibility for reducing those impacts.

We approach our sustainability mission in three ways:

1. **Sustainable Future**: We build data centers that are compatible with a sustainable future. We don’t just build a data center to meet today’s challenges: we need to build it with the future in mind.

2. **Energy and Water Conservation**: We are committed to conserving both water and energy through the effective design, maintenance, and operation of our facilities. We won’t just trade water for energy and ignore its impact.

3. **Strategic Partners**: We aspire to be strategic partners with our customers to move their sustainability goals forward. Our customers have some of the most ambitious sustainability goals of any industry, so the best thing we can do for the environment is to help them succeed.

Risk Management

Overview
We take a unified approach to strategy, risk management, and reporting by using our Materiality Assessment to identify a common set of priorities. More detail about our Materiality Assessment is found in “Chapter 3: Priorities and Materiality”.

We detail topic-specific risk management approaches in “Chapter 4: Energy and Carbon”, “Chapter 5: Water Conservation”, “Chapter 6: Habitat”. However, since our approach to climate risk stretches across all of these topics, we have summarized it here.

Climate Risk
We identify climate change and its impacts as a risk to our business but also as an opportunity for long-term strategic success. Because of this, we think about climate risks in two main ways:

1. **How we affect climate change**: e.g. our emissions of greenhouse gases and impacts on resources and habitat

2. **How climate change affects us**: e.g. the potential impacts of climate disruption that are out of our control, even if we do mitigate our emissions.

We have identified five primary ways climate change might impact our business: cost to operate, barriers to operate, customer preference, water stress, and flooding.

CyrusOne’s approach to understanding and addressing climate risk is multi-faceted. Of course, we have the typical business continuity planning, physical security, and operational risk management you would expect from a top-tier public colocation provider with geographically diverse operations. But specific to climate risk, we address each of the above factors with the following:

But specific to climate risk, we address each of the above factors and our effect on climate change in “Chapter 4: Energy and Carbon”.

Cost to Operate
Climate change can result in increased operating costs. This will most likely affect us in the form of increased costs for electricity (our main input), originating either from regulations (such as a carbon tax) or customer requirements (such as an internal price on carbon or performance requirements). Increased costs could arrive as higher construction or retrofit costs for future regulatory compliance or to mitigate increased risks, such as water stress and flooding.

To understand how a price on carbon (from regulatory or customer demands) will affect our facilities, we first conducted a **Carbon Intensity Assessment** to understand the carbon intensity of the electrical grids where we operate. Next, we completed a **Carbon Pricing Assessment**. To mitigate our exposure to these potential costs, we seek to reduce our use of carbon-intensive electricity through efficient facility design, facility operation, and procuring renewable energy. For more information on all of these assessments, see “Chapter 4: Energy and Carbon”.

The potential increased costs from climate change can also be an opportunity if we are able to offer more efficient and thus more competitive services than our peers. Our research into green leasing will also help us to align incentives with our customers so that we can both succeed in a higher cost scenario.
Barriers to Operate

Laws, regulations, or public perception may limit our ability to develop new facilities in a particular region or restrict areas in which we wish to operate.

We address the risk of new barriers to operation by reducing the local impacts of our facilities by design. Reducing our facilities’ water demand and improving wildlife habitat in the areas where we operate will allow us to demonstrate benefits to local communities. Our risk management tools, Environmental Impact Assessments and Protected Areas Assessments, help us to avoid barriers by identifying sensitive lands that affect the local community and slow project development. For more information, see “Chapter 5: Water Conservation” and “Chapter 6: Habitat”.

Customer Preference

As companies prioritize climate change mitigation strategies, they will be looking for business partners who can help them achieve those goals. Unless we can offer solutions to help our customers, we risk losing their business. Instead, by providing low-carbon colocation services that help customers meet their own climate mitigation goals, we can grow our business while also catering to their needs. We are managing this opportunity by developing accurate customer reporting, researching customer sustainability targets, proactively engaging with our customers, and investigating innovations to help meet those targets.

Water Stress

Drought is one of the commonly predicted consequences of climate change. Increased water stress in areas where we operate may reduce our access to water for operations or increase friction with local communities. Facilities dependent on water for cooling may face operational interruptions or require costly retrofits to less water-intensive types of cooling.

To understand our exposure to water risk, we conducted a Water Risk Assessment, which is described in “Chapter 5: Water Conservation”. We address the risk of increased water stress by setting a target to build new data centers that do not dependent on water for cooling. Furthermore, we have a target for our facilities in high water stress regions to become net positive contributors of water to local watersheds to reduce our exposure to water stress and to improve the region’s water supply. We firmly believe that our aggressive stance on prioritizing water conservation will become an opportunity for success even as water scarcity increases.

Flooding

Climate change is also predicted to increase the likelihood of flooding in the form of excessive rainfall events and sea level rise. Shifts in weather patterns have demonstrated that flood risk maps based solely on historical data do not accurately predict future flood risk. Sea level rise from climate change will cause flooding in regions near coasts and increase the range of impacts from severe coastal weather events such as hurricanes.

To understand this risk, we conducted a Future Flood Risk Assessment using a variety of tools to consider the effects of different climate change projections on the flood risk at our facilities. This allows us to anticipate any additional risk to existing facilities and to develop mitigation strategies when needed. This is also an opportunity to use more complete information about future risks to select sites for new facilities.

Future Flood Risk Assessment

Even if we mitigate our own carbon emissions, we understand that traditionally flood-safe areas may now face increased flood risk due to climate change. We evaluated projections of future flood risk by using a variety of tools, including the Flood Factor and UK Long Term Flood Risk tools, as well as government-issued reports.

Using these tools, we found that over 80% of our facilities are located in areas that will retain a low flood risk categorization in the next 30 years. For the remaining facilities that are projected to face increased flood risk, we can now evaluate targeted actions to make these facilities more resilient to potential future flooding. We also use these tools proactively to research and select new locations with a better understanding of the future flood risk.

We understand that there are additional strategies we can employ to further understand our exposure to climate risk, which we see as an important aspect of managing business risk. We will continue to expand our efforts to reduce exposure to climate risk in the future.
Metrics and Targets

Overview

To measure progress toward our sustainability goals, we have created a set of primary metrics and targets. These are the metrics that we find most relevant to measuring our progress and against which we set targets. This report includes metrics and targets throughout for each topic that we have established to date, as detailed in each relevant section.

<table>
<thead>
<tr>
<th>Primary Metric</th>
<th>UOM</th>
<th>2019 Level</th>
<th>Target Level</th>
<th>Pg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Usage Effectiveness</td>
<td>kg CO₂/IT kWh</td>
<td>0.66</td>
<td>Zero by 2040</td>
<td>12, 19</td>
</tr>
<tr>
<td>Carbon Intensity, Scope 1+2+3</td>
<td>MTCO₂e/ft²</td>
<td>0.30</td>
<td>Zero by 2040</td>
<td>12, 19</td>
</tr>
<tr>
<td>Facilities with Renewable Option</td>
<td>% of facilities</td>
<td>100%</td>
<td>100% ✔️</td>
<td>16</td>
</tr>
<tr>
<td>Carbon Emissions, Scope 1+2</td>
<td>MTCO₂e</td>
<td>354,189</td>
<td>Zero by 2040</td>
<td>12, 18</td>
</tr>
<tr>
<td>Carbon Emissions, Scope 1+2+3</td>
<td>MTCO₂e</td>
<td>964,947</td>
<td>Zero by 2040</td>
<td>12, 18</td>
</tr>
<tr>
<td>Net Positive Water Facilities in High Stress Regions</td>
<td># of facilities</td>
<td>1</td>
<td>7 (all currently in high stress regions)</td>
<td>22</td>
</tr>
<tr>
<td>New Data Centers with Water-free Cooling</td>
<td># of new facilities</td>
<td>100%</td>
<td>100% ✔️</td>
<td>13, 23</td>
</tr>
<tr>
<td>Facilities with Improved Habitat</td>
<td>% of facilities</td>
<td>2%</td>
<td>100% ✔️</td>
<td>26</td>
</tr>
</tbody>
</table>

✔️ = Target Complete

Alignment with Reporting Standards

In addition to our primary metrics, we have aligned our sustainability reporting with several industry standards to provide maximum transparency and to give our customers and investors the ability to compare apples to apples.

Data Center Standards

Since we are a data center company, we follow industry standard metrics developed by The Green Grid, such as Power Usage Effectiveness (PUE), Water Usage Effectiveness (WUE), and Carbon Usage Effectiveness (CUE). For more details about these metrics, please see “Chapter 4: Energy and Carbon” and “Chapter 5: Water Conservation”.

Sustainability Reporting Standards

In addition to the description of “Meeting Third-Party Standards” in “Chapter 1: Introduction”, we go beyond our primary metrics to report on standardized metrics and methods from the Task Force on Climate-related Financial Disclosures (TCFD), Sustainability Accounting Standards Board (SASB), Global Reporting Initiative (GRI), GRESB (formerly known as Global Real Estate Sustainability Benchmark), and the World Resource Institute Greenhouse Gas Reporting Protocol (WRI GHGP).

Specific primary metrics are included throughout the body of the report, and the full list of standardized metrics are detailed in “Chapter 9: Summary Appendix 2 Standardized Metrics”.

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Chapter 2: Management Approach | 8
Chapter 3 Priorities and Materiality

Priorities for strategy and materiality for sustainability reporting are two sides of the same coin. We use a unified process to identify where we have the biggest sustainability impacts and where we should focus our improvements. Environmental sustainability covers many different topics, so it was necessary for us to identify which topics are the most important for us to report and, equally as important, which issues to set aside. To make this distinction, we conducted a materiality assessment.

Method

Process

For the first step in the materiality assessment, we surveyed all members of our Sustainability Working Group, along with select experts in the company who could represent specific topics or stakeholders. Based on guidance from GRI and this survey information, we determined if various topic were 1) important to stakeholders and 2) impactful to the environment. We then used these two factors then used to determine what we do and do not report.

Materiality

To determine what could be considered material, we had to answer three key questions: what, where, and when. For what, we looked across industries to determine what impacts our industry contributes to most. For where, we considered the locations in which we operate in order to ensure that we are sensitive to local and regional issues. Finally, for when, we assessed topics both as they are now and as they are projected to be in 10 – 20 years.

Important to Stakeholders

To determine the importance to stakeholders, we evaluated the degree to which each type of stakeholder has conveyed concern about each topic. The scores were then weighted to reflect our strategic focus on the customer. For the purposes of this first assessment, stakeholders are defined as customers, investors, and communities. In the future, we may try to include additional stakeholders, such as teammates (employees), non-governmental organizations (NGOs), or suppliers.

Impact to the Environment

To determine the impact to the environment, we again asked three questions: What is our impact on human health and habitat? What is our impact on scarce resources? What is our impact on climate? The scores were then weighted to provide a final impact score.

Results

Combining Importance and Impact gives us this heat map of topics to focus on for reporting, with topics in the top right (green) requiring the most attention and topics in the bottom left (blue) needing the least.

What’s In and Why

Based on the results (as shown by the heat map above), we determined to report on the following topics:

- Energy consumption and carbon emissions: Our single largest impact is energy consumption and the carbon emissions associated with many forms of energy. While consolidating many smaller data rooms into fewer, larger data halls in our operations allows for greater efficiencies, the energy needs for these data centers is still very large. We recognize our responsibility to further pursue energy efficiency and decrease carbon emissions, both from our equipment and that of our customers’. We will report on our efforts to use energy efficiently and shift to lower carbon alternatives.
• **Water consumption and risk:** The data center industry has long treated water as an “invisible” resource in the pursuit of energy efficiency. With the consolidation of servers into fewer, larger data halls, we as an industry are also contributing to the concentration of water demands into fewer watersheds — creating localized, concentrated impacts — instead of having the demand spread across many watersheds. This means that there is the potential to create a proportionally large water demand from a large data center on a single water source, many of which are already facing water stress. We will report on our progress to use water efficiently, appropriately account for it in our operations, and restore flows of water in local watersheds.

• **Building certification:** We understand that, in addition to constructing and operating efficient buildings, some stakeholders also value 3rd party certification of these building features (e.g. LEED, BREEAM, Energy Star, etc.). We will report on our evaluation and progress on building certifications.

• **Construction and site selection:** Our strength in quickly building data centers underscores the responsibility we have to select sites where environmental impacts can be minimized and to proactively manage impacts during construction. We will report on our efforts to reduce environmental impact during these phases.

• **Climate risk planning:** As a company that prizes resilience and uptime, we have expanded our risk management processes to include a suite of climate-related risks to help us anticipate and mitigate risks to our business. We will report on our expanding efforts to evaluate this risk and adapt our operations to further increase resilience in the face of likely challenges.

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**What’s Out and Why**

Similarly, topics that scored low in the materiality assessment in both importance to stakeholders and impact on the environment represent topics that scored low in the materiality assessment — in both importance to stakeholders and impact on the environment — are topics that we considered but decided are not the focus of our reporting. We will, of course, meet all compliance obligations on these topics and may still continue to work on improving them, but they will not be as prominent in our strategy or reporting as the material topics listed above. These lower valued topics include:

- **Procurement and supply chain:** Since we do not process a steady stream of raw materials the way a manufacturer would, we will not focus on supply chain impacts (other than electricity, represented above under Energy Consumption and Carbon Emissions).

- **Solid waste generation:** Our facilities do not generate significant waste during operation except for lead acid batteries, which we will continue to manage responsibly and evaluate for alternatives. For construction waste, we will report on that as part of Construction and Site Selection.

- **Wastewater generation:** With our strategy of water-consumption-free cooling, we do not generate industrial wastewater in the same way that facilities who rely on evaporation-based cooling do.

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**Future Evaluation**

We know that we will learn more as we address these issues, so we will update our materiality assessment before next year’s report.
Overview
By nature, data centers require a large amount of energy. They must remain fully operational 24/7 and run IT equipment that draws large amounts of power. Furthermore, the systems supporting 24/7 operation generate a large amount of heat thereby requiring energy to keep them cool. If the energy supplying a data center is based on fossil fuels (directly or indirectly), it will result in carbon emissions, which will contribute to climate change. However, there are a number of approaches that we have taken to address our environmental impacts from energy use, including the associated carbon emissions.

Strategy
Our approach to reducing our environmental impact through energy and carbon falls under three main strategies: (1) Our standard design for new buildings incorporates many energy efficiency measures. We review best practices in the industry, partner with suppliers, and take innovative approaches in design and construction to achieve cost-effective efficiency. (2) For existing facilities, we strive to reduce energy and carbon emissions through smart operational practices and facility upgrades. (3) Through strategic site selection and energy procurement, we can increase renewable and low-carbon power sources for our operations.

A key part of our strategy is to integrate water and energy metrics to form a more complete picture of our efficiency. As described in “Chapter 5: Water Conservation”, water use is usually “invisible” to energy calculations like PUE, which frequently leads to the tradeoff of decreased energy use for increased water consumption. However, we know that water consumption can have huge regional environmental impacts. By reporting energy metrics that reference water use, we are charting a new course in our industry for increased transparency and hope that others follow suit.

Within our energy and carbon strategy, there are two key distinctions we make in our portfolio: 1) whether the facility is a legacy build or a modern design and 2) whether the facility consumes water for cooling (“wet”) or not (“dry”).

Modern vs Legacy Data Centers
We group our facilities into two categories: (1) modern facilities that we designed and built based on our design standards or that we acquired and are otherwise consistent with our design standards and (2) legacy facilities, which are older facilities that we purchased or built before implementing our modern standards. We make this distinction because the energy and carbon use from our modern facilities in operation should give a relatively accurate estimate of the emissions from those facilities that are still in development and construction, since they are built to the same standards. This distinction between legacy and modern facilities also guides our strategy for improving existing facilities (see Energy Efficient Operations).

Wet vs Dry Data Centers
Among our legacy data centers, there are a few that consume water for cooling (e.g. water towers or evaporative coolers) which we term “legacy wet” facilities and others that consume no water for cooling, called “legacy dry” facilities. Because energy metrics (like PUE, below) treat water as “invisible”, we make the distinction between facilities relying on increased water consumption to reduce their PUE and those that achieve it without water. All of our modern data centers (including pre-stabilized and under-development sites) are built to provide cooling without consuming water, thus categorizing them as dry.

This table summarizes the composition of our data center portfolio. The percentage is based on the total available colocation square footage (whether occupied or not) at directly managed facilities.

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modern Dry Facilities</td>
<td>60%</td>
</tr>
<tr>
<td>Pre-Stabilized or Under Development (Dry)</td>
<td>3%</td>
</tr>
<tr>
<td>Modern Dry Facilities</td>
<td>60%</td>
</tr>
<tr>
<td>Legacy Dry</td>
<td>Facilities 10%</td>
</tr>
<tr>
<td>Legacy Wet</td>
<td>Facilities 22%</td>
</tr>
</tbody>
</table>

Scope: Total colocation floor area at directly managed facilities, excluding two customer-managed facilities.
Risk Management

Energy efficiency reduces our environmental impact and also provides resilience against some types of risk. By reducing our reliance on energy, we also reduce the strain we place on the grid and the resulting risk of grid power interruptions, as well as our exposure to price volatility. Additionally, having efficient operations allows us to minimize regulatory risk, such as preempting costly adaptation measures with energy efficient programs in place to meet more stringent regulations in the future.

Energy consumption makes up nearly all of our carbon footprint. Carbon emissions to the atmosphere are directly linked to climate disruption. As a responsible corporate citizen, CyrusOne recognizes the importance of reducing our own carbon footprint in order to contribute to the global effort to mitigate climate change and its associated risks.

Currently, our greenhouse gas data covers 99.6% of our colocation capacity (the missing 0.4% is due to lack of data from two small, leased legacy facilities). Moving forward, all new facilities will be included to give us an accurate understanding of our entire carbon footprint.

Metrics and Targets

Here are the primary metrics and targets, as applicable, that we use to measure our progress on energy and carbon issues. For more information about these metrics, see “Chapter 9: Summary Appendix 1 Primary Metrics”.

Target: Zero Carbon by 2040

Our main target for Energy and Carbon is our Zero Carbon by 2040 commitment. We are still developing the particulars of how to will draw down our carbon emissions while we grow as a company, but we have committed to operating carbon-free by 2040. In this commitment, we include both the carbon emissions from our support infrastructure (cooling, lighting, power handling, etc.) and those of our customers’ IT equipment (servers).

To reach this target, we follow two metrics to understand our energy use efficiency and the resulting carbon emissions: PUE and CUE. While PUE and CUE are the most common measurements of efficiency in the industry (see below), there are some limitations to these metrics, so we also track Energy and Carbon Intensity (per square foot). Taken together, these metrics provide a fuller picture of efficiency in our portfolio. We report our current state for these metrics in the later sections of this chapter.

Metric: Power Usage Effectiveness (PUE) and Carbon Usage Effectiveness (CUE)

Power Usage Effectiveness is the ratio of a data center’s total electricity usage to the electricity delivered to servers. This extra, non-server power is used to operate the cooling, lighting, and other mechanical systems necessary for server operation. Since CyrusOne doesn’t make any decisions about the efficiency of the servers themselves, we focus on how efficiently we can support their cooling and power needs. Similarly, Carbon Usage Effectiveness is the ratio of total carbon to the carbon emitted from the electricity delivered to servers. Since 98% of our Scope 1 and Scope 2 carbon emissions are due to electricity consumption, these two metrics are closely related within a facility but can vary between facilities based on the source of electricity.

Metric: Energy/Carbon Intensity (per Occupied Colocation Square Foot)

Energy/carbon intensity describes the energy or carbon use per occupied colocation area in our facilities. Energy intensity is measured in kilowatt hours per square foot (kWh/ft²), and carbon intensity is measured in metric tons of carbon-dioxide equivalent per square foot (MTCO₂/ft²).

Energy Efficient Building Design

The best opportunity for energy efficiency happens during the initial design of new facilities. Since data centers are built for long lives and reliability, the decisions we make today will set the stage for efficient operations into the future.

Strategy

CyrusOne generally uses one standard design for new data center builds. Standardizing the design allows us to include energy-saving technologies across our portfolio and simplifies later upgrades. The three primary strategies that we use to design efficient data centers are 1) minimize data hall heat, 2) right cooling, right place, right time, and 3) supplier partnerships.

Minimize Data Hall Heat

The most effective efficiency gains come from improving the efficiency of support equipment inside the data halls. This is because any inefficient equipment not only wastes electricity, but also produces excess waste heat which must then be cooled, consuming more electricity. There are several areas we focus on to minimize data hall heat:

1) High-efficiency uninterruptible power supplies (UPS): The UPSs we source generate little waste heat and operate efficiently even while operating at 50% of maximum capacity, so the data center doesn’t have to run at full capacity for peak efficiency.
2) **Ultrasonic humidification**: Instead of using heat or pressurized water to produce water vapor for humidification, our ultrasonic humidification systems maintain the necessary humidity using only 7% of the energy of more traditional electric steam humidifiers, all without adding heat to the data hall.

3) **LED lighting**: Older lighting technology converts more of its electricity into heat than into light, but modern LED lighting gives us the double dividend of less data hall heat and less wasted electricity. Coupled with occupancy sensors, our LEDs deliver lighting only where and when it’s needed.

**Right Cooling, Right Place, Right Time**

Because colocation data halls host a variety of customers who run a variety of servers, they must be built to be flexible and to remain efficient at a wide range of capacity. This is especially noticeable when a facility is first starting up and customers have yet to finish their server installations. Older cooling technologies had to be run at full capacity regardless of the actual need for cooling, which resulted in overproduction and waste. Our modern data centers use a variety of technologies to deliver the right cooling to the right place at the right time regardless of capacity. Those technologies include:

1) **Building management systems**: Using intelligent systems and sensor networks, the data center predicts the need for cooling and adjusts chiller output, air handling, and other factors to meet customer needs with minimal electricity use.

2) **Economizers**: Also called “free cooling” systems, economizers use low outdoor ambient air temperatures to generate chilling when the weather is right, using roughly 1/7 of the electricity required by standard chillers. Economizers are installed in facilities where the local climate provides efficient free cooling.

3) **High-efficiency chillers**: The air-cooled chillers that we source are selected for efficiency, flexibility, and reliability. We design for water-free cooling from the ground-up, maximizing the efficiency of our systems and avoiding dependence on water. Water is used in only a closed loop system to remove heat from the data hall, but no water is consumed in the process.

4) **Throttling**: Our systems use controllable variable frequency drives (VFDs) to power air handlers and pumps, meaning they don’t have to be “all on” or “all off.” The cooling distribution equipment is operated at just the right level needed for optimal cooling without wasting energy.

5) **Partnering with customers**: We work with customers to provide optimal cooling to their servers and to achieve good hot aisle/cold aisle separation and containment. We also optimize the airflow directed to customer equipment to best match its power draw.

6) **Liquid-to-chip cooling ready**: This system allows even higher efficiency for customers who want to use various liquid cooling methods (in-row cooling, liquid-to-cabinet, liquid-to-chip, and immersion cooling).

**Supplier Partnerships**

Finally, we partner with our equipment suppliers to identify new high-efficiency technologies and to alter equipment specs to support our particular design needs, rather than just using “off the shelf” equipment when it’s an imperfect fit.

**Metrics and Targets**

We measure our progress on energy efficient building design with the following metrics and targets, as applicable:

**Target: Industry-competitive PUE without consuming water**

Our target is for all newly built facilities to offer competitive energy efficiency without consuming water. Only small amounts of water will be withdrawn for facility maintenance and domestic water. Some facilities may be built with optional water-consuming equipment but must also have the air-cooled chilling capacity to fully operate without it.

For more information about water-free cooling, see “Chapter 5: Water Conservation”. For more information about how we operate efficiently and track PUE, see Energy Efficient Operations on page 14.
Highlight Story: Council Bluffs I Data Center

The latest example of energy efficient design from CyrusOne is our Council Bluffs I data center. This facility demonstrates the energy efficient features that are part of our standardized build. Upon full build out, the site will have 18 MW of total power available across roughly 30,000 square feet of data hall space. This facility includes a long list of energy-efficient features, achieving its low PUE without depleting local water supplies. These features include:

- High-efficiency uninterruptible power supplies (UPS)
- LED lighting with occupancy sensors
- Building management system
- Economizer/free cooling
- High-efficiency chillers
- Water-consumption-free cooling with a closed loop chilled water system
- Throttling variable frequency drives (VFDs) for CRAH units
- Liquid-to-chip cooling ready

For more information about these metrics, see “Chapter 9: Summary Appendix 1 Primary Metrics”.

Energy Efficient Operations

Along with facility design and construction, we also strive to reduce energy consumption in the operations of our existing facilities.

Strategy

We focus on operating all facilities efficiently through the use of building management systems, airflow modeling, and carefully balancing cooling delivery with server needs. We work with customers to offer rack blanking panels, properly sized airflow floor tiles, and cold aisle containment and to get the most utility from the supplied chilled air. Also, we partner with our suppliers to identify new high-efficiency technologies and to customize equipment specs to meet our particular needs.

In order to get the most efficiency gains for our efforts, we look for ways to retrofit and upgrade equipment at the least efficient facilities first. To inform our opportunistic decisions about where to invest in upgrades, we also consider the carbon intensity of the local grid, so as to achieve the biggest carbon reduction for our investment. We also prioritize opportunities to achieve both energy efficiency and reliability improvements within the same project.

Metrics and Targets

Here are the primary metrics we use to measure our progress on energy efficient operations:

**Metric: Operating Power Usage Effectiveness (PUE)**

Below are our PUE metrics for 2019 for the three facility categories. These averages only include stabilized data centers that have finished their commissioning, start-up, and initial customer installations. Pre-stabilized facilities, those under development, and those for which data is unavailable are not included in the PUE averages. PUE has a minimum of 1.00, and a lower score indicates greater effectiveness.

<table>
<thead>
<tr>
<th>Reporting Category</th>
<th>2018 Average PUE</th>
<th>2019 Average PUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legacy Dry</td>
<td>1.63</td>
<td>1.65</td>
</tr>
<tr>
<td>Legacy Wet</td>
<td>1.64</td>
<td>1.68</td>
</tr>
<tr>
<td>Modern (Dry)</td>
<td>1.57</td>
<td>1.57</td>
</tr>
<tr>
<td>All Facilities</td>
<td>1.60</td>
<td>1.60</td>
</tr>
</tbody>
</table>

Scope: Includes facilities that are stabilized and directly managed by CyrusOne.
**Metric: Energy Intensity**

Energy intensity only includes in-scope energy and building area from data hall space that is stabilized, occupied, and directly managed. It is calculated as a ratio of total energy use (including fuels and energy supplied to customer servers) to stabilized occupied colocation area. A lower energy intensity indicates greater efficiency.

<table>
<thead>
<tr>
<th>Energy Intensity</th>
<th>Metric</th>
<th>2018</th>
<th>2019</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Legacy Dry Facilities</strong></td>
<td>Total Energy Use (MWh)</td>
<td>303,000</td>
<td>281,000</td>
<td>-7.3%</td>
</tr>
<tr>
<td></td>
<td>Stabilized Occupied Colocation Area (ft²)</td>
<td>284,000</td>
<td>267,000</td>
<td>-6.0%</td>
</tr>
<tr>
<td></td>
<td>Energy Intensity (MWh/ ft²)</td>
<td>1.06</td>
<td>1.06</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Legacy Wet Facilities</strong></td>
<td>Total Energy Use (MWh)</td>
<td>488,000</td>
<td>490,000</td>
<td>+0.4%</td>
</tr>
<tr>
<td></td>
<td>Stabilized Occupied Colocation Area (ft²)</td>
<td>770,000</td>
<td>712,000</td>
<td>-6.4%</td>
</tr>
<tr>
<td></td>
<td>Energy Intensity (MWh/ ft²)</td>
<td>0.63</td>
<td>0.68</td>
<td>+8.0%</td>
</tr>
<tr>
<td><strong>Modern (Dry) Facilities</strong></td>
<td>Total Energy Use (MWh)</td>
<td>1,153,000</td>
<td>1,755,000</td>
<td>+52.2%</td>
</tr>
<tr>
<td></td>
<td>Stabilized Occupied Colocation Area (ft²)</td>
<td>1,921,000</td>
<td>2,302,000</td>
<td>+20.0%</td>
</tr>
<tr>
<td></td>
<td>Energy Intensity (MWh/ ft²)</td>
<td>0.60</td>
<td>0.76</td>
<td>+26.7%</td>
</tr>
<tr>
<td><strong>All Facilities</strong></td>
<td>Total Energy Use (MWh)</td>
<td>1,932,000</td>
<td>2,506,000</td>
<td>+29.7%</td>
</tr>
<tr>
<td></td>
<td>Stabilized Occupied Colocation Area (ft²)</td>
<td>2,947,833</td>
<td>3,239,076</td>
<td>+9.9%</td>
</tr>
<tr>
<td></td>
<td>Energy Intensity (MWh/ ft²)</td>
<td>0.66</td>
<td>0.77</td>
<td>+16.7%</td>
</tr>
</tbody>
</table>

*Scope: Facilities that are stabilized, occupied, and directly managed by CyrusOne.*

Energy Intensity increased from 2018 to 2019 in legacy wet facilities and in our modern facilities. In our legacy wet facilities this was driven by a decrease in occupied colocation area, while in modern facilities, this is likely due to the growth of high performance computing at newer facilities, increasing the energy density of actual server use.

For more information about these metrics, see “Chapter 9: Summary Appendix 1 Primary Metrics”.

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**Highlight Story: Houston Galleria UPS Upgrade**

CyrusOne’s Houston Galleria site is an example of successful retrofits to improve efficiency in operations. As a legacy dry facility, the building design does not necessarily meet our modern building standards. One challenge was that the older UPS units installed at the facility did not operate efficiently under low loads, requiring a full load to reach their peak efficiency. However, in order to provide reliability, this data center was designed with multiple, redundant UPSs so that one could fail without hindering server uptime. This means that each UPS was operating at no more than 75% load, well into its inefficient range. This inefficiency resulted in wasted energy and excess heat, which then required additional cooling. By replacing these UPSs with modern designs that are efficient across a wide range of loads, we greatly reduced our energy consumption and improved our PUE. Additionally, the new UPS units are more reliable, which improves the durability and resilience of the facility.
Energy Procurement

The sources from which we procure energy have a significant impact on our energy and carbon goals. This section describes our efforts toward green energy procurement.

Strategy

Now that we have set our Zero Carbon by 2040 target, we are in the process of developing a more comprehensive renewable energy strategy. As we build new facilities and as existing energy contracts come to an end, we will evaluate renewable energy offerings. Our considerations as we evaluate renewable energy opportunities include meeting customer needs, achieving competitive pricing, reducing carbon intensity, and reducing exposure to market volatility. To help us consider the effect of renewables on carbon emissions, we also account for the relative carbon intensity of different grids where we operate to understand the carbon reduction per MWh from switching to renewables.

Because our Zero Carbon by 2040 target includes the emissions from electricity supplied to customer equipment, renewable energy procurement will have to be the biggest part of meeting our goal. Our efficiency measures only affect our support equipment, and even there, efficiency alone won’t get us to zero. We will continue to evolve our renewables strategy to meet these targets and challenges.

Metrics and Targets

Most of our energy procurement metric performance is represented in our Zero Carbon by 2040 target and the metrics we use to evaluate it (see Energy and Carbon Metrics and Targets, earlier in this chapter). By switching to less carbon-intensive electricity providers, energy procurement contributes to overall carbon reductions. The following are a few metrics specific to renewable energy that we track for insight into our current performance for customers and investors:

**Metric: Percent of Electricity Procured as Renewable**

We measure the amount of energy that we procure that is 100% renewable as a percentage of all the electricity that we purchase (including electricity delivered to customers). Currently, our London I and II data centers run on a 100% renewable energy tariff, which comprises 5.7% of CyrusOne’s total electricity procured in 2019. This is an improvement over the 0.5% renewable power across our portfolio in 2018.

**Metric: Percent of Electricity Offset as Renewable**

We also measure the amount of energy that we pair with unbundled Renewable Energy Certificates (RECs) or other offset mechanisms. We do not currently employ any offset measures but plan to clearly communicate if we begin using them. We do expect to consider RECs as part of our strategy to meet our Zero Carbon by 2040 target.

**Metric: Percent of Grid-Embedded Renewable Energy**

As we consider the carbon intensity of grids in our siting decisions, we also pay attention to how much renewable power is supplied by the grids from which we source power. While we don’t take credit for the efforts of power providers to expand their renewable portfolio, it is helpful to track their progress to see the effects of renewable energy development and advocacy in the region. We also make this information available to customers for each location via our location sustainability profiles on the CyrusOne website. This measurement is grid-embedded renewable electricity as a percentage of our total electricity procurement.

<table>
<thead>
<tr>
<th>Renewable Power Metrics</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procured Renewables</td>
<td>0.5%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Offset Renewables</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Grid-Embedded Renewables</td>
<td>13.5%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

**Metric: Percent of Facilities with Renewable Option**

Currently 100% of our facilities have the ability to offer customers some form of renewable power as an upgrade through our power provider.

For more information about these metrics, see “Chapter 9: Summary Appendix 1 Primary Metrics”.
Highlight Story: Switching to a Greener London

London I

London II

London I, located in Slough, and London II, located in Stockley, comprise a combined 23MW of IT power. “As large energy users in the UK, the data center industry is in a strong position to effect change in terms of how green energy is priced and made available,” said Matt Pullen, Executive Vice President and Managing Director – Europe, CyrusOne. “Traditionally, green energy tariffs have been priced at a premium, but as more users demand their energy from renewable sources, the rates we can negotiate are decreasing rapidly. We continue to explore ways to maximize the efficiency and resource usage in our data centers so that we can pass those benefits along to our customers.”

These data center facilities are now running on a 100% renewable energy tariff, a move which will transition energy usage equivalent to 52,000 households per year to zero-emissions sources.

Highlight Story: Sun in the Desert

Phoenix-Chandler

Phoenix-Chandler is our largest data center campus and is planned to be the largest data center campus in Arizona. In 2019 our power provider, Salt River Project (SRP), approached us with the opportunity to help green-light a 100 MW solar plant being built in Coolidge, AZ by committing to buying its renewable energy. In considering the opportunity, we consulted with customers, who heartily supported the effort to add additional renewable power to the region. We signed up for 6.5MW of the project and look forward to the solar facility coming online and delivering carbon- and water-free power to us by 2021. We anticipate that this will replace about 6% of this facility’s electricity supply with renewable power.
Greenhouse Gas Inventory
To understand our greenhouse gas impacts (our carbon metrics) we prepared a greenhouse gas inventory using the standards set by the WRI Greenhouse Gas Protocol (WRI GHGP).
For details about the scope of our inventory, please see “Chapter 9: Summary Appendix 1 Primary Metrics”.

Strategy
Our greenhouse gas strategy comprises two goals: (1) reduce our greenhouse gas footprint and (2) provide useful business insight.

To reduce our greenhouse gas footprint, we first focus on reducing energy consumption (see Energy Efficient Building Design and Energy Efficient Operations). Second, we look for lower-carbon energy options, such as directly procured renewables. Finally, we consider offset mechanisms like Renewable Energy Certificates (RECs) and carbon offsets (see Energy Procurement).

Our strategy for preparing our greenhouse gas inventory is to meet customer and investor information needs while informing internal decisions. We do this by following industry standards set forth by WRI, GRI, SASB, TCFD, and CDP Carbon. By providing transparency about our impacts, we support our customers’ goals and our investors’ decision making process.

The high-quality carbon data from our greenhouse gas inventory also provides an opportunity for us to inform internal strategic decisions across the company, thereby avoiding emissions by design. These are detailed in the Risk Management section below.

We also provide clear carbon data to customers and prospective customers to help them make informed decisions about reducing their own emissions through our facility sustainability profiles in the Location section of our website.

Risk Management
Our risk management around carbon emissions currently takes on two forms: (1) carbon intensity assessment and (2) carbon pricing assessment.

This is part of our overall climate risk strategy which is detailed in “Chapter 2: Management Approach”.

Carbon Intensity Assessment
To understand the impact our electricity sourcing has on carbon emissions, we have conducted a carbon intensity assessment. In this assessment, we found dramatic differences in carbon intensities between different non-renewable electricity supplies (i.e. regional grid electricity); the highest carbon intensity is about five times higher than the lowest. Having a facility-by-facility understanding of carbon intensity informs our decisions about facility upgrades, renewable energy procurement, and site selection.

Carbon Pricing Assessment
We analyzed our portfolio to consider the impact of carbon pricing on our competitiveness, be it from a regulatory change (e.g. carbon tax or cap-and-trade) or from customer internal carbon pricing (e.g. internal carbon fee). Building on our carbon intensity assessment, we found that carbon pricing will affect facilities to different degrees based on the composition of their delivered power. Quantifying the risk in this way helps us to make informed planning decisions for future upgrades and energy procurement.

Results
Over 98% of our 2019 Scope 1 and Scope 2 emissions came from purchased electricity (Scope 2), as is typical for the data center industry. Less than 2% of our annual carbon emissions were generated from diesel and natural gas use in our operations (Scope 1). Since diesel is used for emergency backup generation, year-to-year use is highly variable based on the number of power disruptions. The quantities are summarized below. For more information about these metrics, see “Chapter 9: Summary Appendix 1 Primary Metrics ”.
Metric: Absolute Greenhouse Gas Totals

For our internal (Scope 1 and Scope 2) emissions, there was an increase in GHG emissions from 285,752 metric tons of CO$_2$-equivalent (MT CO$_2$e) in 2018 to 354,189 MT CO$_2$e in 2019. This rise was driven by increased business activity as occupation expanded at new facilities. In 2019, our internal (Scope 1 and Scope 2) emissions were 37% of our total inventory. The remaining 63% were from customer electricity use.

<table>
<thead>
<tr>
<th>MTCO$_2$e</th>
<th>Scope 1</th>
<th>Scope 2</th>
<th>Scope 3</th>
<th>Internal Total</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Diesel/Natural Gas</td>
<td>Electricity</td>
<td>Customer Electricity</td>
<td>Scope 1+2</td>
<td>Scope 1+2+3</td>
</tr>
<tr>
<td>2018</td>
<td>3,752</td>
<td>282,000</td>
<td>510,234</td>
<td>285,752</td>
<td>795,987</td>
</tr>
<tr>
<td>2019</td>
<td>7,046</td>
<td>347,142</td>
<td>610,759</td>
<td>354,189</td>
<td>964,947</td>
</tr>
</tbody>
</table>

Metric: Carbon Intensity

For carbon intensity, we divide our carbon emissions by stabilized, occupied colocation square feet at directly managed facilities. A lower carbon-intensity score indicates greater efficiency.

<table>
<thead>
<tr>
<th>Carbon Intensity (MTCO$_2$/ft$^2$)</th>
<th>Scope 1+2 2018</th>
<th>Scope 2-2 2019</th>
<th>Scope 1+2+3 2018</th>
<th>Scope 1-3 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legacy Dry</td>
<td>0.18</td>
<td>0.17</td>
<td>0.45</td>
<td>0.45</td>
</tr>
<tr>
<td>Legacy Wet</td>
<td>0.11</td>
<td>0.12</td>
<td>0.27</td>
<td>0.29</td>
</tr>
<tr>
<td>Modern (Dry)</td>
<td>0.08</td>
<td>0.10</td>
<td>0.24</td>
<td>0.28</td>
</tr>
<tr>
<td>All Facilities</td>
<td>0.10</td>
<td>0.11</td>
<td>0.27</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Scope: Facility area that is stabilized, occupied, and directly managed.

These carbon intensity results reflect the energy intensity increases from 2018 to 2019 in “legacy wet” facilities and in our modern facilities. In our “legacy wet” facilities, this was driven by a decrease in occupied colocation area, while in modern facilities, this is likely due to the growth of high performance computing, which increases the energy density of actual server use.

Metric: Carbon Usage Effectiveness (CUE)

Carbon Usage Effectiveness for stabilized facilities that are directly managed, displayed for legacy and modern facilities. CUE has a minimum of zero, and a lower value indicates greater effectiveness.

<table>
<thead>
<tr>
<th>CUE (kg CO$_2$/kWh IT)</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legacy Dry</td>
<td>0.69</td>
<td>0.71</td>
</tr>
<tr>
<td>Legacy Wet</td>
<td>0.71</td>
<td>0.73</td>
</tr>
<tr>
<td>Modern (Dry)</td>
<td>0.64</td>
<td>0.64</td>
</tr>
<tr>
<td>All Facilities</td>
<td>0.66</td>
<td>0.66</td>
</tr>
</tbody>
</table>

Scope: Facilities that are stabilized and directly managed.

Though our CUE at legacy facilities increased slightly, since modern facilities form the bulk of our operating capacity, their continuing efficiency was able to maintain a company-wide average of 0.66 kg CO$_2$/kWh IT energy use. It is of interest that, in both of the above metrics, our modern dry facilities outperform our legacy wet facilities, despite using no water for cooling.
Chapter 5  Water Conservation

Overview

In most data centers, water is commonly used for cooling purposes, replacing electricity or other energy sources. However, we recognize that water is a limited resource in high demand, meaning that issues with water supply could interrupt facility operations. In order to minimize risk, we strive to make our operations as water efficient as possible, with the goal of even being Net Water Positive (see below). Most of our facilities use water-free cooling, and we have begun to acquire Water Restoration Certificates® (WRCs) to restore water to local ecosystems, making our presence a net benefit to the watersheds where we operate.

Strategy

Our water conservation strategy has three main goals to plan for a sustainable future: 1) remove barriers to data center efficiencies, 2) design to avoid dependence on water for cooling, and 3) restore water in high-risk regions.

Data center optimization

Large data centers like ours have great potential to achieve energy and greenhouse gas gains by combining the computing power of many smaller data rooms into fewer larger data centers. The concentration of this computing power allows for more efficiencies, but it also concentrates the environmental impacts into a single region. For issues like greenhouse gas emissions, this concentration is of small consequence since the emissions go into the same atmosphere and climate change is a global issue. But for local issues like water stress, concentrating the water demand into a single watershed can have big impacts on local communities. Our strategy is to remove the negative consequences of water demand so that we can enable the efficiencies that come with large data centers.

Plan for sustainable future

We aim to build and maintain facilities that can function sustainably both now and into the future. With a high likelihood of strained water resources in the regions where we operate, we strive to avoid dependence on water for cooling in both our new and existing facilities. Most of our facilities already use cooling systems that do not consume water (water-free cooling), and we continue to update our cooling systems at existing facilities. We also use future regional water stress projections to inform site selection and design for new facilities. This strategy allows us to make improvements to facility reliability and resilience while becoming future-proof against increased local water stress.

In the past, because the electrical grid relied on thermoelectric generation (consuming water to make steam and then electricity, usually with fossil fuels), it was generally thought that onsite water consumption for cooling was a substitute for water that wasn’t consumed at the power plant. However, we understand that current and future electrical generation will rely more and more on renewable sources. These energy sources (solar, wind, etc.) are dramatically less water-intensive than yesterday’s thermoelectric fossil-fuel generation. When we achieve our Zero Carbon by 2040 target with renewable power, we will consume effectively no water in our electricity supply chain. Since the majority of our sites consume no water for cooling, our total water consumption at these sites is negligible. This leaves us largely insulated from future water risk, as opposed to many other data centers that are designed around water consumption.

This underscores the importance of considering PUE (Power Usage Effectiveness) and WUE (Water Usage Effectiveness, see below) in tandem, rather than treating them as isolated metrics. For more information about PUE, see “Chapter 4: Energy and Carbon”.

Risk-based water management

Water risk is highly regional. Some areas have abundant water, but many areas are facing water stress from an increasing demand and a decreasing supply of fresh water. Because of this, no one approach will work for every situation. To take a risk-based approach, we analyzed every watershed in which we operate to determine its local water risk. In areas where water is scarce, we want to prioritize conservation. But we also want to do more. In these regions we have begun to partner with environmental nonprofits to support projects that restore the water flows to overdrawn systems. This provides benefits to both human water supplies and ecosystem restoration, making our presence in that region net positive for water.
Risk Management

There are two main ways we manage our risk to water supply disruptions and the operational disruptions that they bring. The first is to understand the current and future regional water risk where we operate through a water risk assessment (see below). The second is to use less water in our operations, which insulates us from whatever water risk is present in these regions where we operate. In areas with potential water shortages in the future, decreasing our dependence on water can help us avoid issues with competing water interests, increased water prices, and lack of supply. CyrusOne’s water-free cooling provides significant insulation from the risk of water-supply-based business disruption in regions where water is scarce. As shown in the portfolio summary in “Chapter 4: Energy and Carbon Wet vs Dry Data Centers”, 73% of our colocation floor area is cooled by water-free cooling, which significantly insulates our portfolio from the regional water risk described in our water risk assessment.

Water Risk Assessment

In order to understand the risk of water supply disruption for all of our data centers, we conducted an assessment of current and future water stress in the regions where we operate. This helps us to monitor the water availability both now and projected into the future, to prioritize facilities for our water conservation efforts, and to reduce risk by avoiding dependence on water. This is part of our overall climate risk strategy detailed in “Chapter 2: Management Approach”.

At CyrusOne, we recognize the risk of business interruption at some sites due to water shortages or price increases in just the next decade. With the information from this assessment, we can understand the level of water risk in each region and can take steps to address that risk for our facilities.

Scoping

Our 2020 Water Risk Assessment evaluates the current water stress for all of our facilities and the predicted water stress in 2030 and 2040. We also calculate total water use at the facilities for which we have data (88% of building area) to determine each site’s exposure to regional water risk. For our leased facilities where water use data is not available (12% of building area), we can only monitor the regional risk, not the facility-specific risk. For this assessment, we consider all water withdrawal for our facilities regardless of the end-use of the water (evaporation or discharge).

Results

For each of our facilities with water use data, we compared the water usage to current and future water stress, using the World Resources Institute Aqueduct Water Risk Atlas (WRI Aqueduct). This illustrates the facilities’ overall water risk by comparing water use to local water stress. The results are shown below.

This chart illustrates the success of CyrusOne’s water-free cooling strategy – most of the facilities are already using relatively little water. Additionally, there are currently no facilities that fall into the high risk exposure orange or red areas which indicate high use sites in regions with high water stress.
Below is a chart comparing the water use of each of our facilities with the location’s projected water stress in 2030.

**2030 Water Stress Heat Map**

The most important difference is that the region of our second highest-consumption facility is projected to change from low stress to extremely high stress in the next decade. This illustrates the value of the water risk assessment, providing us the foresight to be able to plan for efficiencies and alternatives now, rather than be surprised by water scarcity in the future. From this chart, we also see that 31 of our 58 facilities are projected to face increased water stress in 2030 (compared to 2020) and 84% of our sites are projected to be rated medium-to-high stress or higher by 2030. Fortunately, the vast majority of these sites are already low water users, underscoring the benefit of water-free cooling.

### Strategy

We will update our water risk assessment annually to monitor this important issue and provide our business processes with the latest data for making decisions. As new facilities are added to our portfolio, they will be added to the next assessment. We will use the results of the water risk assessment to inform decisions inside the company, including site selection, operations, and new facility design.

### Metrics and Targets

Here are the primary metrics and targets we use to measure our progress on water conservation issues. For more information about these metrics, see “Chapter 9: Summary Appendix 1 Primary Metrics”.

#### Target: Net Positive Water in High Stress Regions

Our target for water conservation is not to simply do less bad but to do more good and leave regions better than if we weren’t there. With this in mind, we have set a target to make all of our facilities that are in high water stress regions into Net Positive Water facilities. We accomplish this in three steps. First, we identify which regions are considered high or extremely high water stress using our water risk assessment. Then, we attempt to reduce water usage on the site through operational efficiency measures and upgrades. Finally, we partner with environmental nonprofits to restore water flows in these regions in excess of the water that we use. If we can restore at least 20% more water than we use, we consider this to be a net positive water facility.

We achieved our first net positive water facility at our Phoenix – Chandler campus in 2019 (see below). We are now developing a multi-year plan to convert all of our facilities that are currently in high stress regions to net positive water. After we accomplish our net positive water goals, we will monitor our Water Risk Assessment for regions that become high water stress. When they do, we will make a plan for converting all facilities in those regions to net positive water facilities.

#### Metric: Absolute Water Withdrawal

We track the total water withdrawn by our facilities, regardless of whether the water goes toward cooling, facility maintenance, or domestic water uses.

#### Metric: Water Consumption in High Stress Regions

To focus our attention on areas where water is scarce, we track the total water consumption from regions listed as currently in high or extremely high stress, according to the Aqueduct Water Risk Atlas.
**Metric: Water Usage Effectiveness (WUE)**

The standard metric for measuring water efficiency in data centers is WUE. This metric was created by The Green Grid specifically for data centers to understand and compare their water impact. WUE is a ratio of annual water use to IT equipment energy and is measured in liters per kilowatt hour (L/kWh).

**Water Efficient Building Design**

New CyrusOne data centers are designed to avoid a dependence on water. Traditionally, data centers have used cooling systems that evaporate water, removing millions of gallons of water from the watershed and discharging wastewater with highly-concentrated contaminants to the local treatment system.

Our innovative design instead uses an air-cooled chiller with an integrated compressor and condenser to cool a closed loop of water. This chilled water is used to remove the heat from the data hall, but none is evaporated in the process. The water loop is filled once during construction and remains filled throughout the life of the facility. This closed-loop technology avoids new water usage in operations and the release of concentrated pollutants into the wastewater system. Our water-efficient building design not only minimizes water use, and thus water risk in our operations, but is also significantly faster to build than the water-using cooling systems in other data centers and reduces the need for costly water and sewage infrastructure in buildings. These strategies benefit both our customers and the environment.

*For more information about our innovative design, see our Waterless Cooling white paper.*

**Strategy**

Our strategy is to build all new facilities without relying on water consumption-based cooling, in order to take advantage of the increased reliability and regional environmental benefits. By designing these facilities as efficient, water-free cooled facilities, we avoid the need to retrofit them later. This results in a somewhat higher PUE than could be achieved by “burning” water instead of electricity, but it allows us to prepare for the future and mitigate the impacts data centers have on regional water supplies, especially in regions identified by our Water Risk Assessment as high water stress, such as Phoenix or London. A few facilities may install optional water-consuming equipment, but they are able to fully operate without using it, insulating them from regional water risk should conditions change.

While using non-potable water (such as reclaimed water or rainwater) can provide some energy-saving benefits to the local treatment works (compared to cleaning the water to potable standards), it does little to help the total water balance in the watershed. Since our goal is to reduce regional water stress through our design and operations, we prioritize approaches that eliminate water consumption rather than switching to an alternative water source.

**Metrics and Targets**

*Target: 100% Water-free Cooling in New Data Centers*

We have a target to build all new facilities with water-free cooling. By committing to this strategy, these facilities are efficient water-free cooled facilities both now and into the future.

**Highlight Story: Santa Clara Water-free Cooling**

California’s green building code (Title 24 or CalGreen) has some of the most stringent energy efficiency requirements in the world. Many data centers meet these energy efficiency requirements by evaporating water, which is “invisible” to the energy calculations. When we started planning our new facilities in Santa Clara, California, we knew we needed a different approach. The drought and water stress that California faces is well known; based on our Water Risk Assessment, this area is projected to be in *extremely high* water stress by 2030. So we designed our Santa Clara facilities to meet or exceed the building code requirements without depleting the region’s water supplies, creating our most innovative water-free cooling system yet.
We combined return air coolers with economizing air-cooled chillers, as well as variable speed pumps and drives, to achieve a highly efficient design PUE of 1.23 and WUE of under 0.1 (based on projections of facility maintenance, landscaping, and domestic water). By integrating water efficient technology into our Santa Clara facility design, we reduce stress on the local water resources, leaving more water for use by the surrounding communities as well as the local environment. This goes above and beyond our already highly efficient standard design, and the process has taught us lessons that we can incorporate into future projects.

Water Efficient Operations
In addition to water efficient building design, we have integrated water conservation into our facility operations as well.

Strategy
On our data center campuses, we have integrated drought tolerant plants and reduced irrigation to decrease landscaping water use. In legacy facilities, we are converting some water-consuming cooling to air-cooled equipment. We have uninstalled many indirect evaporative cooling systems, which both use large quantities of water and are difficult to maintain. Thus, our operations have become efficient in water use, as well as having increased reliability for our cooling systems. We continue to try to improve water efficiency in our operations through additional retrofits and operational changes.

Metrics and Targets
These metrics report our progress on water efficient operations.

Metric: Water Consumption in High Stress Regions
This metric measures water consumption at facilities rated as high or extremely high stress in our Water Risk Assessment. It is listed in absolute terms to reflect the impact on local regions.

<table>
<thead>
<tr>
<th>High Stress Regions</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Consumption (kgal/yr)</td>
<td>22,200</td>
<td>20,200</td>
</tr>
</tbody>
</table>

These reductions in 2019 are largely due to efficiency gains at our Totowa facility. This metric includes all 9 of our facilities in high or extremely high water stress regions with water data. It does not include the 2 smaller facilities in high or extremely high water stress regions without water data (which represent only 2.7% of our total building area).

Metric: Water Usage Effectiveness (WUE)
WUE is a measure of water use per server electricity consumed (see description in Water Conservation Metrics). The table below summarizes our average WUE at our various facilities, using the same categories as the Energy and Carbon metrics. For more information about this metric, see “Chapter 9: Summary Appendix 1 Primary Metrics”.

<table>
<thead>
<tr>
<th>WUE (L/kWh)</th>
<th>2018 WUE</th>
<th>2019 WUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legacy Wet</td>
<td>2.66</td>
<td>2.49</td>
</tr>
<tr>
<td>Legacy Dry</td>
<td>0.06</td>
<td>0.10</td>
</tr>
<tr>
<td>Modern Dry</td>
<td>0.11</td>
<td>0.06</td>
</tr>
<tr>
<td>All Facilities</td>
<td>0.47</td>
<td>0.37</td>
</tr>
</tbody>
</table>

While our legacy wet facilities have become more efficient over the past year due to some improved operational strategies, water use at our dry facilities has remained low for both legacy and modern facilities. Because these facilities only use water for facility maintenance and domestic water, the variability in water demand is largely driven by year-to-year changes in irrigation requirements based on local weather conditions.

For more information about these metrics, see “Chapter 9: Summary Appendix 1 Primary Metrics”.
Highlight Story: *Net Positive Water in Chandler*

CyrusOne’s Chandler, Arizona campus is the largest colocation data center campus in our portfolio and, based on our water risk assessment, is located in an extremely high water stress region: the deserts of the American Southwest. Because of this, we selected Chandler as our first net positive water facility.

First, we looked for onsite opportunities at Chandler to reduce our water use. While the facility was already primarily using water-free cooling, there were a few uses of water that we were able to decrease or eliminate, such as removing a few evaporative coolers. Then, to further reduce our impact and benefit the local habitat, we partnered with the Bonneville Environmental Foundation and the Arizona Land and Water Trust to restore water flows to the region using an innovative approach called a Water Restoration Certificate® (WRCs). The particular certificates we supported are generated by helping local farmers switch to high-efficiency irrigation systems, which allow more water to stay in natural waterways.

Through these credits, we restored 40% more water than we used in 2019, making Chandler our first *net positive water* data center and the first such data center that we know of in the world. This project provides a win for our customers by reducing embodied water in their supply chain, a win for the local communities who have more water supply in their regional watershed, and a win for the local habitat by protecting the San Pedro River, the last major free-flowing river in the American Southwest. We learned many lessons in implementing this strategy and will use those lessons at other facilities to meet our net positive water target.

*For more information, see our press release, “CyrusOne Unveils First Net Positive Water Data Center.”*
Chapter 6 Habitat

Overview
The small amount of land that we own offers an additional opportunity for sustainability efforts. While most of each data center campus is occupied by buildings, we seek opportunities for the surrounding land to support a diversity of biological networks in addition to our digital ones.

Strategy
We are still developing our habitat strategy but recognize our opportunity to make contributions on this topic. We approach this work through three distinct phases:

- **Site Selection**: When looking for new data center locations, we prioritize sites in the areas already designated for data centers or similar uses via zoning or existing planned developments, such as technology or business parks.
- **Landscaping**: By choosing our plants carefully, we can provide habitat for various species, such as birds and pollinators.
- **Offsite Service**: We seek opportunities to improve a habitats near our sites by working with local nonprofits.

Risk Management
Our approach to managing risks related to local habitats largely revolves around minimizing the harm from our sites. To evaluate this, we use two forms of risk assessments: (1) Environmental Impact Assessments and (2) Protected Areas Assessments

*Environmental Impact Assessments*
Habitat impacts are a significant aspect of the Environmental Impact Assessments required by law prior to construction of a new facility. By considering sensitive habitats when selecting project sites, we avoid harm and minimize the need for remedial activities and project delays.

*Protected Areas Assessment*
To monitor our ongoing risk related to habitat, we conduct periodic Protected Areas Assessments to verify that our facilities are not adjacent to any protected areas. This allows us to continue to monitor habitat issues after a site is in operation.

Onsite Habitat Improvement

Strategy
While most of our facilities have minimal landscaping, even small areas can have a big impact if we use the land to provide viable wildlife habitat through careful plant selection and placement. We aim to upgrade our existing landscaping to integrate more plants and practices that attract local pollinators, native species, and migratory birds. By using native plants, we can minimize the water and other resources needed for maintenance while benefiting nature.

Metrics and Targets

*Target: Habitat Networks*
Since our facilities are strategically placed to primarily improve data networks, we recognize that the same strategic placement can help provide habitat networks as well. Our target is to improve habitats at each of our facilities. In areas in migratory corridors, we will try to use our facilities to form a network of waystations for migrating birds. For other facilities, we will focus on pollinator gardens to support local biodiversity. It will take some time, but by looking at our facilities as an opportunity to do good instead of simply mitigating harm, we can help to do our part to create an oasis in habitat deserts.

*Metric: Facilities with Improved Habitat*
To track progress on our target, we will track and report how many of our facilities have improved habitat onsite that supports biodiversity in the area. For more information about this metric, see “Chapter 9: Summary Appendix 1 Primary Metrics.”

<table>
<thead>
<tr>
<th>Habitat Networks Target</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities with Improved Habitat</td>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>

In 2019, we tracked progress in the metric due to to the improved habitat at our new Dublin Grange Court facility.

For more information about these metrics, see “Chapter 9: Summary Appendix 1 Primary Metrics”.

Chapter 6: Habitat
Highlight Story: Dublin Onsite Habitat

Our first venture into this topic occurred in 2019 at our new facility in the Dublin, Ireland area. A comprehensive ecology assessment as part of planning resulted in the development of a localized landscaping and ecology brief. Based on this guidance, our landscapers planted native tree species, including a large selection of specimen trees complimentary to the local environment. Our full landscaping design focused on creating areas of grassland, wildflower meadows, and pollinator-friendly wetlands with an emphasis on native plant species. The wetland area on the west and attenuation pond on the north of the site will create a habitat for breeding amphibian species such as the common frog and the smooth newt. Through strict adherence to wildlife requirements, we helped to protect existing species and create native environments that promote sustained growth for future wildlife. It’s a good example of how small spaces can have big impacts.

This is also part of our partnership with Host In Ireland’s DC’s For Bees initiative: https://www.hostinireland.com/dc-s-for-bees

Highlight Story: Bees in Amsterdam

At our Amsterdam I data center, we successfully managed to rehome a swarm of bees who had taken residence in one of our chiller gantries. We’re fortunate that one of our engineers, Luke van den Akker, could bring along his father, a local beekeeper, who managed the rehoming while observing social distancing. As an extension of our commitment and work with Host in Ireland’s DC’s for Bees initiative, we’re ensuring these bees are protected at our facility and able to continue to perform the critical role they play in our ecosystem and to provide vital pollination across the Netherlands.
And we’re happy to report that after moving to their new home, the hive is well and growing new larvae.

**Offsite Habitat Improvement**

**Strategy**

In addition to habitat improvement at our locations, we also look for opportunities in our local communities. Our strategy is to look for projects with multiple benefits, such as the purchase of Water Restoration Certificates® to increase water flows, improving both regional water stress for human use and also local wildlife habitat. For more information about this water restoration, see “Chapter 5: Water Conservation”.

**Metrics and Targets**

We are still developing metrics and targets for offsite habitat improvement.

**Highlight Story: DCs for Bees**

We have engaged with others in our industry through DC’s for Bees to promote and restore bee habitats across Ireland, including a service day to restore habitats in the Wicklow Mountains. On October 25, 2019, we helped to create a long-lasting change in our community’s landscape for the better, working alongside the Native Woodland Trust. In one day, 100 people planted 2,000 trees across 8 acres. This is part of a larger effort of clearing, planting and securing native woodland trees — birch, oak and rowan — to help create a biodiverse forest for the bees that will expand both their living and food resources. This day is just the beginning of the initiative and will see the development of much needed indigenous forest for safe food and shelter that is critical for bees.
Chapter 7 Social Responsibility

Overview
In addition to understanding our impacts on the environment, we also must consider our social responsibilities as a company. At CyrusOne, we recognize that our success depends on people -- on the well-being of our teammates and the communities we serve. Thus, we focus efforts to create a healthy and inclusive workplace culture, provide training and professional development opportunities, and contribute positively to our local communities.

Culture
What makes us exceptional is the respect our teammates demonstrate for each other each and every day. We live by the Golden Rule of respect for each other and the value that each of us brings with our different opinions and views. Our core value of WE CARE3 drives our decisions and actions.

CyrusOne’s Core Values

<table>
<thead>
<tr>
<th>Community</th>
<th>Agility</th>
<th>Respect</th>
<th>Enjoyable Workplace</th>
<th>Ethics</th>
<th>Exceptional Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>We believe in giving back to the communities in which we do business as well as giving back to our CyrusOne community. It’s all part of being caring individuals and corporate citizens of the places we live and work.</td>
<td>We get it done!</td>
<td>We live by the Golden Rule!</td>
<td>We have fun!</td>
<td>Do what’s right!</td>
<td>We WOW you every time!</td>
</tr>
<tr>
<td>Reaching Out!</td>
<td>We focus on delivery. We collaborate, innovate and find solutions that deliver results. We are the ‘glass half full’ people that have a can do, positive attitude and see opportunities where others might not.</td>
<td>Life is too short to not have fun. We believe that having fun should be a part of our work. We embrace it, support it and look for it as a critical part of what makes us successful. • A happy team helps to make a winning team.</td>
<td>We have fun! • Day-in and day-out we are guided by the principle to do what’s right. • We believe that doing what’s right means thinking about others, making difficult decisions and speaking up when people need help.</td>
<td>We are the lifeblood of the places we live and work. We get it done!</td>
<td>We exist because of our customers. Our customers are the foundation of our company and the reason we come to work every day. We aim to WOW-delight, exceed, and bring you each and every time with our services.</td>
</tr>
</tbody>
</table>

In addition, to WE CARE3 our Rules of the Road keep us heading in the right direction.

1. It’s all about the team — We cannot get to where we need to be without all collectively working together. We need to be one team, with one purpose, focused on winning.
2. Respect for each other and our customers — We can have differences of opinion and views, but those differences are never made personal.

3. Only the glass-is-half-full people allowed — Positive attitude is the most important thing to have, and we need to root out anyone who doesn’t have the same positive outlook. We start by saying yes and figure out a way to get there.
4. Look through the windshield — We will never win if we read yesterday’s newspaper, so there is no benefit to worrying about the past. We focus on tomorrow and what we can do to position our company to help our customers win.
5. Customers are the lifeblood of our company — We prioritize customer needs are above our own. Nothing starts until a customer buys something, and the party ends when they stop buying.
6. Speed — One of the most strategically important advantages that we have is our size and ability to move quickly. The faster you move, the faster you get somewhere and the more options you have to change course or move ahead faster.
7. Have fun — Life is too short to not like what you are doing.

Together, our WE CARE3 core values and our Rules of the Road provide us with the culture and moral compass needed to recruit, reward, and retain the best and brightest in our industry. This is how we become a trusted advisor to our customers and leaders in our communities.

Health, Safety and Wellness
As seen in our core values, we are here to improve the lives of our stakeholders — teammates, shareholders, and the communities we serve. For these reasons, we have robust programs in place to help improve the health and well-being of our teammates and local communities.

We provide our teammates a variety of benefit programs that support the needs of our diverse workforce including:

- Medical, Dental and Vision Coverage
- Life/Disability Insurance
- Supplement Insurance Coverages
- Retirement Saving Plan – 401(k) with company match
- Health Savings Account
- Wellness Programs
- Employee Stock Purchase Plan
- Caregiving Benefit
- Benefit Navigation Service
- Telemedicine Benefit
- Teammate Assistance Program
- Parental Leave
We realize our teammates are our most valuable asset, and providing recognition to them is one of the most important things we can do to build a winning culture and achieve strong business results. Here at CyrusOne, we have several ways that we recognize teammates for their service and impact on our business and communities.

- Quarterly CORE Awards
- Expense Saving Contest
- Spot Awards
- Volunteer of the Year Award
- Outstanding Customer Service Recognition
- Anniversary Awards
- The Glass Half Full Award
- “Shout Outs” monthly newsletter

We view safety as a fundamental and significant area of importance to our organization. This begins with our teammates and extends to our customers, contractors, vendors, and other stakeholders we influence. We’ve aligned our practices under the ISO 45001 international safety standard with six areas of focus: leadership and worker participation, planning, support, operation, performance evaluation, and improvement. We’ve also invested heavily in this area to establish world class programs, training, and an enterprise safety information management system called ProcessMap™.

We’re entering into the fourth year of our senior management Environmental, Health, and Safety (EHS) Steering Committee, which ensures alignment on safety standards and needs across our core business functions, including operations and construction. To convey this messaging to the field, we leverage in-person training paired with technology to maximize participant engagement and learning.

This dedication has resulted in outstanding safety performance. Our Recordable Injury Rate (RIR) for 2019 was only 1/3 that of our industry peers. Our Days Away, Restricted, or Transferred (DART) rate was similarly impressive, coming in 40% better than the industry (based on NAICS code).

**Community**

Giving back to the communities in which we do business is part of our DNA. We believe that being great community citizens leads to great leadership and great relationships with our teammates and customers.

For example, we provide paid time off to each teammate to volunteer at the organization of their choice and recognize a teammate each year with our peer-nominated Volunteer of the Year award.

CyrusOne is also involved with many community and non-profit organizations, including:

**Community**
- Katy Trail 5K
- Community Partners of Dallas
- Women’s Business Conference
- Tech Titans

**Education**
- Knowledge is Power Program (KIPP)
- Girl Scouts (USA)
- Midtown Education Foundation support
- Girl Start (STEM Education initiative sponsor)
- Big Brothers Big Sisters

**Health and Hunger**
- Light The Night Cincinnati (Leukemia & Lymphoma Society)
- March of Dimes
- Cotes de Coeur (American Heart Association)
- Relay For Life (American Cancer Socity)
- The Trussell Trust (UK)
- Tafel (Germany)
- The Amsterdam Food Bank (Netherlands)
- Irish Beneficiary
- Hunger Busters

**Veterans and First Responders**
- Carry the Load

In 2019, CyrusOne’s teammates completed 916 hours of volunteer time, and we contributed $104,000 to local charities.
Highlight Story: “Feed The Need”
A huge thank you to our Technology team for packing over 1,700 meals for local children served by Hunger Busters through their “Feed the Need” after school program. Hunger Busters is a Dallas-based charity focused on providing a much-needed third meal of the day for children in the Dallas Independent School District.

Diversity, Equity, and Inclusion
Our TEAM demonstrates exceptional respect for each other every day. We live by the Golden Rule and respect the value that each of us brings in our different opinions and views.

In 2017, CyrusOne launched company-wide Diversity and Inclusion training as part of our HR Roadshow. The training focused on embracing different cultures and ethnicities and engaging with our teammates and customers in a way that reflects and respects their unique perspectives and experiences. This commitment to diversity resulted in CyrusOne being named one of Fortune’s 100 Best Places to Work for Diversity in January of 2019. This training will be repeated as part of our annual training.

CyrusOne uses an outside firm to audit our diversity and inclusion efforts in order to demonstrate that we are compliant with the requirements of the Office of Federal Contract Compliance Programs (OFCCP). We monitor our diversity and inclusion statistics on a monthly basis and use this data when making pay and promotion decisions to ensure that we continue to increase representation. CyrusOne also celebrates many diversity days throughout the year.

In 2020, we set up our CARE Group to help facilitate our discussions around Diversity, Equity, and Inclusion (DEI). This group is tasked with continuing our conversation on how to best understand our teammates’ concerns, provide ways to address them, and further develop our overall strategy around DEI.

We value diversity and work to leverage different experiences, cultures, and skills to drive collaboration, innovation, and growth. Historically, both the data center industry specifically and real estate investment trusts (REITs) generally have been male dominated. This has mostly held true for our workforce in the field where the most prevalent role is data center technician, a position that predominantly attracts male applicants who often have military backgrounds.

Our data center technician training and certification program helps us create more opportunities for women in these roles.

Training/Development
Developing our talent through on-boarding training, ongoing education, and annual performance reviews is crucial to attracting and retaining a highly skilled workforce. In 2019, we adopted a new global, enterprise-wide learning management system (LMS) that provides our teammates with over 800 courses in a variety of subjects that assist with their on-th-job knowledge. Our LMS system includes our annual mandatory training for all teammates around our Code of Business Conduct and Ethics and related policies. CyrusOne also hosts an annual Talent Day event that brings together leadership development and recognition of CyrusOne teammates.

In 2019, our teammates spent over 1,400 hours completing online training, including our annual compliance training.
Overall our TEAM is 67% white and 33% non-white. Our gender breakdown is 74% male and 26% female, while at our headquarters women, represent 46% of our workforce. We have a good mix of age diversity with the majority of our workforce being age 30-60.

**Company Ethnicity**

- White: 67%
- Black or African American: 13%
- Hispanic or Latino: 8%
- Asian: 10%
- American Indian or Alaska Native: 1%
- Native Hawaiian or other Pacific Islander: 0%
- Two or More Races: 1%
- Other: 1.36%

**Gender Diversity**

- Male: 74%
- Female: 26%

**Age Group**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 and under</td>
<td>12.24%</td>
</tr>
<tr>
<td>21-30</td>
<td>30.61%</td>
</tr>
<tr>
<td>31-40</td>
<td>26.98%</td>
</tr>
<tr>
<td>41-50</td>
<td>23.13%</td>
</tr>
<tr>
<td>51-60</td>
<td>3.86%</td>
</tr>
<tr>
<td>61-64</td>
<td>1.81%</td>
</tr>
<tr>
<td>65 and over</td>
<td>1.36%</td>
</tr>
</tbody>
</table>
Chapter 8 **Company Governance**

**Overview**
The way we manage environmental and social issues is the way we govern ourselves. CyrusOne is committed to institutional integrity and ethics throughout our organization. We ensure the highest standards of integrity and ethics through a number of proven methods.

**Independent Oversight**
Our Board of Directors consists of 8 directors, 7 of which are independent. This is important as it avoids conflicts of interests. Furthermore, the independent directors have no direct ties to the company other than their role on the Board. Our Board chair is an independent director which further promotes decision making in the best interest of shareholders.

We have active Board oversight of the company's strategy and risk management, including key topics such as ESG, cybersecurity, and annual enterprise risk assessments. These are especially critical to organizations in our industry due to the mission critical and digital infrastructure nature of our business.

**Board Composition and Diversity**
Our Board is also focused on diversity, which allows both challenges and opportunities to be considered from various points of view. A quarter (25%) of our directors are women or ethnically diverse, including the Board chair and the audit committee chair. The Board is committed to actively seeking out additional highly qualified women and ethnically diverse candidates.

We also invest in ongoing director education and annual Board and committee self-evaluations. This is critical to ensuring that we are leveraging cutting-edge, leading industry practices.

**Stockholder rights and Engagement**
The following conditions/mechanisms describe the rights of our stakeholders:

- Annual election for all directors
- “Plurality” standard for director elections
- Director resignation policy for directors who do not receive a majority of votes cast in uncontested elections
- Bylaws can be amended by stockholders

We engage with stockholders on governance trends, compensation practices, Board composition, succession planning, and sustainability.

**Teammate Training**
While we provide our teammates with resources to learn and grow, training is also an important part of ensuring good governance of our organization. All CyrusOne teammates, including new hires, participate in annual compliance training that covers topics such as conflicts of interest, anti-bribery, corruption, fair dealing, political contributions and activities, antitrust, and many others.

For more information regarding investments on teammates, see “Chapter 7: Social Responsibility”.

Chapter 9 Summary

Through this first sustainability report, CyrusOne recognizes the importance of transparency and awareness of our responsibilities to our stakeholders, our people, and our planet. We are excited to continue to report on our sustainability efforts in the coming years, as we expand our programs and explore new ways to make positive impacts in our world while providing excellent data colocation services.

For more information on sustainability programs at CyrusOne, visit the CyrusOne sustainability website and follow us on social media.

Appendix 1 Primary Metrics Overview

As described in Chapters 1 and 2 and throughout this report, we share results on our primary metrics that we use to measure progress against our goals. This appendix gives provides additional details about exactly how we arrive at each metric and our reasoning for it. We also clarify scoping so that it is clear what is included in these measurements, what is not, and why. While the actual results are in the relevant chapters, our hope is that this can both become a resource for our industry and help our customers and investors compare apples to apples.

Energy and Carbon Metrics

This section provides additional details about the precise metrics and scoping for our primary metrics for energy and carbon efficiency.

Energy Source Scoping

Our operational energy use calculations include four sources:

1. CyrusOne electricity for server support and common areas
2. Customer electricity for customer servers
3. Natural gas for comfort heating (only used at some facilities)
4. Diesel for emergency backup generation at all facilities

These data are combined into a common unit, kWh (using standard conversion factors for natural gas and diesel from the European Framework Initiative for Energy & Environmental Efficiency in the ICT Sector). The energy use data in this report covers all of our US and international facilities where we exercise operational control. Facilities that we do not include are ones where we do not have operational control (such as San Antonio IV) or do not have access to utility information as part of lease terms (London-Woking, International Business Park in Singapore, and our HQ office suites). We anticipate all future facilities will be included in our scope of operational control, and we will clearly state any exceptions to this rule.

Metric: Power Usage Effectiveness (PUE) and Carbon Usage Effectiveness (CUE)

Power Usage Effectiveness (PUE) is the ratio of a data center’s total electricity usage to the electricity delivered to servers. This extra, non-server power is used to operate the cooling, lighting, and other mechanical systems necessary for server operation. Since CyrusOne doesn’t make any decisions about the efficiency of the servers themselves, we focus on how efficiently we can support their cooling and power needs. Similarly, Carbon Usage Effectiveness (CUE) is the ratio of total carbon to the carbon emitted from the electricity delivered to servers. Since the vast majority (over 98% in 2019) of our Scope 1 and Scope 2 carbon emissions were due to electricity consumption, these two metrics are closely related within a facility but can vary between facilities based on the source of electricity.

Using the standard calculations developed by The Green Grid, these measurements determine how efficiently we provide support services to our customers’ servers. PUE and CUE measure the total energy or carbon from a facility (total) divided by the energy used by customer servers (IT). Thus, PUE has a theoretical minimum of 1.0 Total kWh/IT kWh (indicating that no energy is used to provide cooling and energy distribution to the servers) while CUE could reach 0 kg CO2/IT kWh (indicating no carbon is generated by the facility’s operations). When taking averages of these metrics, we only include stabilized facilities that we manage directly as to avoid the volatility of pre-stabilized facilities and those out of our operational control.

PUE and CUE are helpful metrics because they scale with customer demand for power, which predicts the amount of heat generated by servers. This heat is the primary driver of our own power usage in providing cooling (and thus drives our carbon emissions as well).

The challenge with this metric is that water is “invisible” and can be used to lower PUE and CUE without recognizing the impact of water consumption. This is why we make a distinction between wet and dry data centers. PUE is also subject to volatility based on how much of a data center’s capacity is in use. This is why PUE must be considered in conjunction with Energy and Carbon Intensity (below) to see the full picture.
**Metric: Energy/Carbon Intensity (per Occupied Colocation Square Foot)**

Energy/carbon intensity describes the energy or carbon use per area for our facilities. Energy intensity is measured in kilowatt hours per square foot (kWh/ft²), and carbon intensity is measured in metric tons of carbon-dioxide equivalent per square foot (MTCO²e/ft²). Both of these metrics include the Total Energy or Total Carbon from the facility, including fuels, electricity used for infrastructure, and electricity supplied to customer servers.

Within our data centers, the vast majority of the environmental impacts originate, directly or indirectly, from server activity in the data halls. Because of this, we measure business activity for these metrics in occupied colocation square feet. “Occupied” means that a customer has not only rented the space but has also installed their servers and begun to draw power.

“Colocation” refers to the server housing space (data halls) and does not include office space, common areas, or support infrastructure (power rooms, service yard, HVAC equipment). Office space and common areas do draw minimal amounts of power, but they are insignificant compared to the data halls, so including them would muddle our measurements. Even though the support infrastructure area does draw power, it is in service to the data halls, so we find the colocation building area to be the best denominator of our intensity metrics. Furthermore, we only include stabilized facilities that we directly manage (removing the two tenant-operated/indirectly managed facilities from both our energy and building area metrics).

This fictitious data hall floor plan illustrates which building area is included in the denominator of the intensity metric.

To determine our company-wide averages, we further focus our metrics on stabilized occupied colocation square feet. In the first year or two of operation, data centers require energy for start-up activities and may have low occupancy while customers plan their move-in and begin operations. This can result in volatile metrics that skew averages. These facilities are referred to as pre-stabilized, and we do not include them in averages (though they are included in gross totals). Once they become stabilized, we include them in averages without negatively impacting our data quality.

The challenge with these metrics is that, within our portfolio, some facilities are designed to provide more power density (W/ft²) to customer servers in order to support high-performance computing (HPC). Modern facilities tend to support a higher design power density than legacy facilities. Of course, how our customers use this design capacity is up to them, and they often do not draw the full power available to the space. So, if the energy intensity of a facility decreases, it could be because the facility became more efficient due to an upgrade or good management, or it could mean that customers changed their computing power needs. This is why Energy and Carbon Intensity must be considered in conjunction with PUE and CUE to see the full picture.

**Metric: Percent of Electricity Procured as Renewable**

We measure the amount of energy that we procure that is 100% renewable as a percentage of all the electricity that we purchase (including electricity delivered to customers). This includes mechanisms such as retail green power offerings, Power Purchase Agreements (PPAs), Virtual Power Purchase Agreements (VPPAs), and others.

**Metric: Percent of Electricity Offset as Renewable**

We also measure the amount of energy that we pair with unbundled Renewable Energy Certificates (RECs) or other offset mechanisms as a percentage of all the electricity that we purchase (including electricity delivered to customers).

**Metric: Percent of Grid-Embedded Renewable Energy**

As we consider the carbon intensity of grids in our process for selecting data center sites, we also pay attention to how much renewable power is supplied by the grids from which we source power. While we don’t take credit for the efforts of power providers to expand their renewable portfolio, it is helpful to track their progress in order to see the effects of renewable energy development and advocacy in the region. This measurement is grid-embedded renewable electricity as a percentage of our total electricity procurement.
Our greenhouse gas (GHG) inventory accounts for greenhouse gas emissions from electricity, diesel, and natural gas. This includes direct emissions from our operations (Scope 1), purchased electricity (Scope 2), and indirect emissions including those from our customers’ IT equipment (Scope 3). Our choice to report customer IT equipment emissions as Scope 3 is based on guidance from the WRI Greenhouse Gas Protocol (WRI GHGP) and BSR Future of Internet Power (BSR FOIP). Our Scope 1 emissions come from burning diesel in backup generators and natural gas in facility heating. We do not purchase any other energy, such as district heat or chilled water, for our Scope 2 emissions. Also, other than customer IT emissions, we do not consider other Scope 3 emissions at this time because we believe they are incidental to our total carbon emissions.

This method of accounting for GHG emissions avoids double counting or undercounting, where-by our customers include their equipment emissions (servers) in their own Scope 2 calculations and consider our energy use part of their indirect Scope 3 emissions, as outlined in the BSR FOIP report, “GHG Emissions Accounting, Renewable Energy Purchases, and Zero-Carbon Reporting: Issues and Considerations for the Colocation Data Center Industry.”

The GHG inventory data in this report covers all of our global facilities where we exercise operational control. Facilities that we do not include are those where we do not have operational control (such as San Antonio IV) or do not have access to utility information as part of lease terms (London-Woking, International Business Park in Singapore, and our HQ office suites). We anticipate that all facilities built in the future will be included in our scope of operational control, and we will clearly state any exceptions to this rule.

Following the WRI Greenhouse Gas Protocol, our GHG Inventory evaluates the major greenhouse gases: carbon dioxide, methane, nitrous oxide, refrigerants, and sulfur hexafluoride. We do not currently have data on refrigerant emissions, so those are not included in our inventory, but we plan to include them in the future. Sulphur hexafluoride was evaluated and does not apply to our operations. All emissions are reported in carbon dioxide equivalents, based on the global warming potential of each gas relative to carbon dioxide, as determined by the US EPA.

Our earliest year of available complete data is 2018, which also serves as our baseline year. We are seeking to expand our access to historical data before 2018 so that we can re-evaluate our baseline year.

In 2019, we discontinued operations at our South Bend Facilities (Crescent and Monroe), removing them from both our baseline and 2019 data. We also started operations at Sterling VIII, adding its data to our totals (though it is currently considered pre-stabilized, so it is not included in averages).

**Water Conservation Metrics**

This section provides additional details about the precise metrics and scoping for our primary metrics for water conservation and restoration.

**Metric: Absolute Water Withdrawal**

We track the total water withdrawn by our facilities, regardless of whether the water goes toward cooling, facility maintenance, or domestic water uses. This is a helpful metric because it indicates the total impact we have on potable water supplies in the regions where we operate. The limitation of this metric is that it does not distinguish between withdrawal, where we return water to the local treatment works and consumption (such as evaporating water for cooling or landscaping) where the water is put beyond use of the watershed (such as industrial wastewater or sewage).

**Metric: Water Consumption in High Stress Regions**

To focus our attention on areas where water is scarce, we track the total water consumption from regions listed as currently in high or extremely high stress by the Aqueduct, according to the Aqueduct Water Risk Assessment. This is a helpful metric because it is a risk-based approach that focuses on where we are removing water from regions that have little of it. The limitation of this metric is that it does not, in itself, take into account future water stress or how it is projected to change. We compensate for this limitation by using our water risk assessment to incorporate future water stress into our planning.

Since we don’t have detailed submetering, we made an assumption that all water used at our legacy wet facilities (our few facilities that use water-consuming cooling) was consumed—even though some of it is domestic and facility maintenance water that is discharged for treatment. Similarly, at our dry facilities, we assume that all water is discharged for treatment, even though some a portion of it is consumed through landscape irrigation.
**Metric: Water Usage Effectiveness**

The standard metric for measuring water efficiency in data centers is Water Usage Effectiveness (WUE). This metric was created by The Green Grid specifically for data centers to understand and compare their water impact. WUE is a ratio of annual water use to IT equipment energy, and is measured in liters per kilowatt hour (L/kWh). This metric allows us to understand how much water we are using in our facility operations relative to the energy used for data operations. Since IT energy usage drives the need for cooling, often water usage is often linked to energy use, and an increase in IT energy leads to an increase in water consumption. By the Green Grid standard, WUE should only be calculated using water that is used for IT equipment support. Other water use — such as facility maintenance (cleaning, irrigation, etc.) and domestic use (bathrooms, break rooms, etc.) — can be excluded. However, because our facilities tend to use such little water, we do not submeter the different water uses. Thus, our calculations of WUE include all uses of water at the facility, which artificially inflates them over the standard calculation. Even considering this, our WUE is still industry-leading (see “Chapter 5: Water Conservation”).

**Metric: Net Positive Water Facility**

We consider a facility to be net positive water if we are able to partner with environmental nonprofits to restore water flows in these regions in excess of the water that we use. To ensure that the positive portion is not just a token amount (such as one gallon), we consider a facility to be a net positive water facility if we can restore at least 20% more water than we use. For example, if a facility uses 5 million gallons of water and we restore at least 6 million gallons of water, we consider it net positive for water.

**Habitat Metrics**

This section provides additional detail about the precise metrics and scoping for our primary targets for habitat improvement.

**Metric: Facilities with Improved Habitat**

To track progress on our target, we will track and report how many of our facilities have an improved habitat onsite that supports biodiversity in the area. Because small spaces can have big impacts, according to the Wildlife Habitat Council, this metric counts as a facility if it has at least 100 square feet of improved habitat, such as a pollinator garden or migratory waystation. This metric tells us how widespread our habitat network has become, rather than the total land area improved.

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**Appendix 2 Standardized Metrics**

**Overview**

As described in Chapters 1 and 2, this report aligns with three systems of standardized metrics: GRI, TCFD, and SASB. These standardized metrics are organized into the table below. The metrics are grouped based on GRI, and we have also highlighted when a metric covers multiple disclosures, such as TCFD and SASB. Since environmental topics are generally accepted to have the largest impacts in the data center industry, we have focused on those standardized metrics in our first year of reporting. Note that all CyrusOne buildings fall within the REIT property subcategory “Data Centers.” All numbers represent the data as of the close of 2019 unless otherwise specified.

**Metrics Summary Table**

<table>
<thead>
<tr>
<th>Index</th>
<th>General Disclosures</th>
<th>2019 Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 102-1</td>
<td>Name of org</td>
<td>CyrusOne, Inc.</td>
</tr>
<tr>
<td>GRI 102-2</td>
<td>Activities, brands, products, and services</td>
<td>Colocation data centers for the world’s largest companies</td>
</tr>
<tr>
<td>GRI 102-3</td>
<td>Location of headquarters</td>
<td>2850 N Harwood St., Suite 2200 Dallas, Texas 75201</td>
</tr>
<tr>
<td>GRI 102-4</td>
<td>Location of operations</td>
<td>CyrusOne Locations webpage</td>
</tr>
<tr>
<td>GRI 102-5</td>
<td>Ownership and legal form</td>
<td>Publicly held company, Real Estate Investment Trust (REIT)</td>
</tr>
<tr>
<td>GRI 102-6</td>
<td>Markets served</td>
<td>Markets are served in the North American and European markets with partnerships extending to South America and Asia. Our main clients are either enterprise IT departments in companies or hyperscale cloud services.</td>
</tr>
<tr>
<td>GRI 102-7i</td>
<td>Number of employees</td>
<td>452 employees</td>
</tr>
<tr>
<td>GRI 102-7ii</td>
<td>Number of operations</td>
<td>49 data centers</td>
</tr>
<tr>
<td>SASB IF-RE-000.A</td>
<td>Net sales/net revenues</td>
<td>$41.4 million net income</td>
</tr>
<tr>
<td>GRI 102-7iv</td>
<td>Total capitalizations (debt and equity)</td>
<td>Debt $2,886.6 million, Equity $2,434.6 million</td>
</tr>
<tr>
<td>TCFD</td>
<td>A breakdown of reserves and an indication of associated emissions factors to provide insight into potential future emissions</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Index</td>
<td>Metric</td>
<td>2019 Response</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>GRI 102-7v</td>
<td>Quantity of products/services provided</td>
<td>4,068,418 colocation square feet (ft²) (Does not include leasable office space)</td>
</tr>
<tr>
<td>SASB IF-RE-130a.4, TCFD</td>
<td>Percentage of eligible portfolio that has an energy/sustainability rating by property subsector</td>
<td>Percentage of portfolio with an energy/sustainability rating, by floor area: 2.7% (LEED and ENERGY STAR)</td>
</tr>
<tr>
<td>SASB IF-RE-130a.4</td>
<td>Percentage of eligible portfolio that is certified to ENERGY STAR by property subsector</td>
<td>Percentage of portfolio that is ENERGY STAR certified by floor area: 1.6%</td>
</tr>
<tr>
<td>GRI 102-10</td>
<td>Significant changes to the organization’s size, structure, ownership, or supply chain</td>
<td>From 2018, there was a 6% growth in colocation area available.</td>
</tr>
<tr>
<td>GRI 102-14</td>
<td>A statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy for addressing sustainability.</td>
<td>Letter from CEO in “Chapter 1, Introduction”</td>
</tr>
<tr>
<td>GRI 102-45a</td>
<td>A list of all entities included in the organization’s consolidated financial statements or equivalent documents.</td>
<td>Reported in the <a href="#">2020 10-K, Exhibit 21.1</a></td>
</tr>
<tr>
<td>GRI 102-45b</td>
<td>Whether any entity included in the organization’s consolidated financial statements or equivalent documents is not covered by the report.</td>
<td>No, all subsidiaries are covered by our report.</td>
</tr>
<tr>
<td>GRI 102-47</td>
<td>A list of the material topics identified in the process of defining report content.</td>
<td>General, Energy, Water and Effluents, Biodiversity, Emissions, Effluents and Waste, Compliance, Supplier Environmental Assessment</td>
</tr>
<tr>
<td>GRI 102-50</td>
<td>Reporting period for the information provided.</td>
<td>CY2019</td>
</tr>
<tr>
<td>GRI 102-51</td>
<td>If applicable, the date of the most recent previous report.</td>
<td>None, this is our first report</td>
</tr>
<tr>
<td>GRI 102-53</td>
<td>The contact point for questions regarding the report or its contents.</td>
<td>Kyle Myers, Director of EHS &amp; Sustainability</td>
</tr>
<tr>
<td>GRI 102-55a, b</td>
<td>The GRI content index, which specifies each of the GRI Standards used and lists all disclosures included in the report.</td>
<td>This table serves as the content index.</td>
</tr>
<tr>
<td>SASB TC-IM-130a.3</td>
<td>Discussion of the integration of environmental considerations into strategic planning for data center needs</td>
<td>See Strategy section in “Chapter 2, Management Approach”</td>
</tr>
<tr>
<td>SASB IF-RE-450a.2</td>
<td>Description of climate change risk exposure analysis, degree of systematic portfolio exposure, and strategies for mitigating risks</td>
<td>Portfolio-wide assessments for future risks to water supplies and flooding and current exposure to grid carbon intensity. Strategies for mitigating risk can be found under “Risk Management” in each chapter of the report. Climate risk assessment is summarized in “Chapter 2, Management Approach”.</td>
</tr>
<tr>
<td>SASB IF-RE-450a.1, TCFD</td>
<td>Area of properties located in 100-year flood zones (flood hazard zones), by property subsector</td>
<td>Area of properties in flood hazard (100-year flood) zones: 51,290 ft²</td>
</tr>
</tbody>
</table>

### General Disclosures

- **GRI 102-7v**: Quantity of products/services provided.
- **SASB IF-RE-130a.4, TCFD**: Percentage of eligible portfolio that has an energy/sustainability rating by property subsector.
- **SASB IF-RE-130a.4**: Percentage of eligible portfolio that is certified to ENERGY STAR by property subsector.
- **GRI 102-10**: Significant changes to the organization’s size, structure, ownership, or supply chain.
- **GRI 102-14**: A statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy for addressing sustainability.
- **GRI 102-45a**: A list of all entities included in the organization’s consolidated financial statements or equivalent documents.
- **GRI 102-45b**: Whether any entity included in the organization’s consolidated financial statements or equivalent documents is not covered by the report.
- **GRI 102-47**: A list of the material topics identified in the process of defining report content.
- **GRI 102-50**: Reporting period for the information provided.

### Climate Risk Disclosures

- **SASB IF-RE-450a.2**: Description of climate change risk exposure analysis, degree of systematic portfolio exposure, and strategies for mitigating risks.
- **SASB IF-RE-450a.1, TCFD**: Area of properties located in 100-year flood zones (flood hazard zones), by property subsector.

### Energy Disclosures

- **GRI 302-1a, TCFD**: Total fuel consumption within the organization from non-renewable sources, in joules or multiples, and including fuel types used.
- **GRI 302-1b**: Total fuel consumption within the organization from renewable sources, in joules or multiples, and including fuel types used.
- **GRI 302-1c**: Total electricity consumption.
### Metrics Summary Table (continued)

<table>
<thead>
<tr>
<th>Index</th>
<th>Metric</th>
<th>2019 Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy Disclosures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRI 302-1, TCFD</td>
<td>Total energy consumption within the organization, including methods and assumptions in the calculations.</td>
<td>Total energy consumption within the organization (portfolio): 9,475,173,574 MJ, or 9,745,174 GJ. Of the total electricity consumed by the portfolio, 94.3% is grid energy, and 5.7% is purchased renewable. Calculation based on purchased electricity and fuels. Conversion factors from ICT Footprint (European Framework Initiative for Energy &amp; Environmental Efficiency in the ICT Sector) for diesel energy content, NREL: <a href="https://openei.org/wiki/Definition:Therm">https://openei.org/wiki/Definition:Therm</a>. The energy consumption data covers 100% of directly managed colocation floor area of portfolio.</td>
</tr>
<tr>
<td>GRI 302-2</td>
<td>Energy consumption outside the organization</td>
<td>No energy is consumed outside of the organization.</td>
</tr>
<tr>
<td>SASB IF-RE-130a.3</td>
<td>Like-for-like percentage change in energy consumption for the portfolio area with data coverage, by property subsector</td>
<td>From 2018 to 2019, there was a 0.4% increase in total energy consumption</td>
</tr>
<tr>
<td>TCFD</td>
<td>Expenditures (OpEx) for low-carbon alternatives (e.g., R&amp;D, technology, products, or services)</td>
<td>Not Available</td>
</tr>
<tr>
<td>TCFD</td>
<td>Investment (CapEx) in low-carbon alternatives (e.g., capital equipment or assets)</td>
<td>Not Available</td>
</tr>
<tr>
<td>GRI 302-3, TCFD</td>
<td>Building energy intensity (by organization specific metric); intensity ratio for the organization</td>
<td>0.78 MWh/ ft² (occupied colocation square feet) across all directly managed facilities, including electricity, natural gas, and diesel consumption within the organization.</td>
</tr>
<tr>
<td>SASB IF-RE-130a.5</td>
<td>Description of how building energy management considerations are integrated into property investment analysis and operational strategy</td>
<td>See “Chapter 4, Energy and Carbon”</td>
</tr>
<tr>
<td>SASB IF-RE-410a.2</td>
<td>Percentage of tenants that are separately metered or submetered for grid electricity consumption, by property subsector</td>
<td>100% of tenants submetered for electricity</td>
</tr>
<tr>
<td><strong>Emissions Disclosures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRI 305-1,2,3</td>
<td>GHG emissions (Scope 1, 2, and 3), including methods and approach for calculations</td>
<td>CY19 Greenhouse Gas Emissions, in metric tonnes CO₂ equivalent (MTCO₂e): Scope 1: GHG Emissions (direct emissions): 7,046 MTCO₂e Scope 2: GHG Emissions, Market-based (indirect emissions from purchased electricity): 311,729 MTCO₂e Scope 3: GHG Emissions, Location-based (indirect emissions from purchased electricity): 354,017 MTCO₂e Scope 3: GHG Emissions (indirect emissions from other sources): 610,759 MTCO₂e</td>
</tr>
<tr>
<td>GRI 305-4, TCFD</td>
<td>GHG emissions intensity, including organization specific metric and gases included in the calculation</td>
<td>CY19 Greenhouse Gas Emissions Intensity Scope 1+2 intensity: 0.11 MTCO₂e/ft² Scope 1+2+3 intensity: 0.30 MTCO₂e/ft² Our metric for the denominator of intensity calculations is occupied colocation square feet that are directly managed by CyrusOne, and calculations include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).</td>
</tr>
<tr>
<td><strong>Water Disclosures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRI 303-3, GRI 303-5a,b, SASB TC-IM-130a.2, SASB IF-RE-140a.2, TCFD</td>
<td>Total water withdrawal, consumption, and discharge</td>
<td>Water withdrawn: 590.8 ML (153.0 ML or 26% in areas with high or extremely high water stress) Water discharged: 141.1 ML (76.3 ML or 54% in areas with high or extremely high water stress Water consumed: 449.7 ML (76.6 ML or 17% in areas with high or extremely high water stress) All water used is 100% freshwater, and is all municipally-supplied water (combination of surface and groundwater sources).</td>
</tr>
<tr>
<td>GRI 303-3d</td>
<td>Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.</td>
<td>At this time, we are assuming that, in facilities which use evaporation for cooling, 100% of the metered water is consumed (though some water is used for domestic and facility maintenance purposes). We do not include our geothermal cooling, which pumps 2,984.4 ML per year of groundwater and returns it to the same watershed.</td>
</tr>
</tbody>
</table>

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**Chapter 9: Summary**
### Water Disclosures

<table>
<thead>
<tr>
<th>Index</th>
<th>Metric</th>
<th>2019 Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>SASB IF-RE-140a.1.1, 1.2</td>
<td>Water withdrawal data coverage</td>
<td>Data coverage: Only includes open facilities for which water data is available, covering 91% of portfolio (and 92% of areas in high and extremely high water stress). Data is not available for some leased facilities.</td>
</tr>
<tr>
<td>GRI 303-5c</td>
<td>Change in water storage in megaliters, if water storage has been identified as having a significant water-related impact.</td>
<td>Water storage is not a significant impact.</td>
</tr>
<tr>
<td>SASB IF-RE-140a.3</td>
<td>Like-for-like percentage change in water withdrawn for portfolio area with data coverage, by property subsector</td>
<td>From 2018 to 2019, water withdrawal decreased by 2.8% across all buildings in the portfolio with data coverage.</td>
</tr>
<tr>
<td>GRI 303-5d</td>
<td>Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used, including whether the information is calculated, estimated, modeled, or sourced from direct measurements, and the approach taken for this, such as the use of any sector-specific factors.</td>
<td>Water consumption data sourced from utility billing and calculated for geothermal cooling based on constant-flow pump activity.</td>
</tr>
<tr>
<td>TCFD</td>
<td>Building water intensity (by occupants or square area)</td>
<td>194.2 L/ft² (managed occupied colocation square feet)</td>
</tr>
<tr>
<td>SASB IF-RE-140a.4</td>
<td>Description of water management risks and discussion of strategies and practices to mitigate those risks</td>
<td>See “Chapter 5, Water”</td>
</tr>
<tr>
<td>SASB IF-RE-410a.2</td>
<td>Percentage of tenants that are separately metered or submetered for water withdrawals by property subsector</td>
<td>No tenants are separately submetered for water.</td>
</tr>
</tbody>
</table>

### Biodiversity Disclosures

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRI 304-1</td>
<td>Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas</td>
<td>None identified, as verified by a Protected Areas Assessment (see Chapter 6).</td>
</tr>
<tr>
<td>GRI 304-2</td>
<td>Significant impacts of activities, products, and services on biodiversity</td>
<td>No significant impacts of activities on biodiversity, as verified by a Protected Areas Assessment.</td>
</tr>
<tr>
<td>GRI 304-2a</td>
<td>Nature of significant direct and indirect impacts on biodiversity with reference to one or more of the following: i. Construction or use of manufacturing plants, mines, and transport infrastructure ii. Pollution (introduction of substances that do not naturally occur in the habitat from point and non-point sources) iii. Introduction of invasive species, pests, and pathogens iv. Reduction of species v. Habitat conversion vi. Changes in ecological processes outside the natural range of variation (such as salinity or changes in groundwater level)</td>
<td>No significant impacts identified.</td>
</tr>
<tr>
<td>GRI 304-2b</td>
<td>Significant direct and indirect positive and negative impacts with reference to the following: i. Species affected ii. Extent of areas impacted iii. Duration of impacts iv. Reversibility or irreversibility of the impacts</td>
<td>No significant impacts identified.</td>
</tr>
<tr>
<td>GRI 304-3a</td>
<td>Size and location of all habitat areas protected or restored and whether the success of the restoration measure was or is approved by independent external professionals.</td>
<td>Data not available.</td>
</tr>
<tr>
<td>GRI 304-3b</td>
<td>Whether partnerships exist with third parties to protect or restore habitat areas distinct from where the organization has overseen and implemented restoration or protection measures.</td>
<td>Partnership with Bonneville Environmental Foundation and Arizona Land and Water Trust to restore water flows to Arizona rivers.</td>
</tr>
</tbody>
</table>
### Metrics Summary Table (continued)

<table>
<thead>
<tr>
<th>Index</th>
<th>Metric</th>
<th>2019 Response</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Biodiversity Disclosures</strong></td>
<td></td>
</tr>
<tr>
<td>GRI 304-3c</td>
<td>Status of each area based on its condition at the close of the reporting period.</td>
<td>Data not available.</td>
</tr>
<tr>
<td>GRI 304-3d</td>
<td>Standards, methodologies, and assumptions used.</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>GRI 304-4</td>
<td>IUCN red list species and national conservation list species with habitats in areas affected by operations (Critically endangered, endangered vulnerable, near threatened, least concerned)</td>
<td>None.</td>
</tr>
<tr>
<td></td>
<td><strong>Effluents and Waste Disclosures</strong></td>
<td></td>
</tr>
<tr>
<td>GRI 306-3</td>
<td>Total number and total volume of recorded significant spills.</td>
<td>No significant spills.</td>
</tr>
<tr>
<td></td>
<td><strong>Compliance Disclosures</strong></td>
<td></td>
</tr>
<tr>
<td>GRI 307-1a,b</td>
<td>Significant fines and non-monetary sanctions for non-compliance with environmental laws and regulations in terms of: i. total monetary value of significant fines ii. total number of non-monetary sanctions iii. cases brought through dispute resolution mechanisms If the organization has not identified any non-compliance with environmental laws and/or regulations, a brief statement of this fact is sufficient.</td>
<td>No significant fines or sanctions. CyrusOne has received warning letters, investigation letters, and notice of violations under our air permits and underground storage tank authorizations. The letters and notices were all followed up on and corrected immediately, and none of them resulted in a material violation. In fact, many of the letters and notices were based on administrative deficiencies, such as alleged failure to submit a report or provide a signature.</td>
</tr>
</tbody>
</table>