

The [Task Force on Climate-related Financial Disclosures \(TCFD\)](#) recommendations are structured around four thematic areas—governance, strategy, risk management, and metrics and targets—to help investors and others understand how reporting organizations think about and assess climate-related risks and opportunities.

2024 TCFD INDEX

GOVERNANCE

a. Describe the board's oversight of climate-related risks and opportunities.

Crown Castle's board, including through its committees, oversees climate-related risks as part of its broader annual enterprise risk assessment. The risk assessment process takes place throughout the year at regularly scheduled meetings of the board and its committees. The Nominating and Governance Committee assists the board in overseeing our sustainability strategies, goals and initiatives and receives quarterly updates from senior management regarding related risks, opportunities, priorities, initiatives and progress toward our goals. The Nominating and Governance Committee engages in a question-and-answer session regarding the information relayed during the quarterly sustainability update and provides feedback to our Executive Management Team ("EMT") as they deem necessary or appropriate. Our sustainability materials, including our Sustainability Report, the content on our sustainability webpage and our Materiality Assessment Map, are presented at least annually to the Nominating and Governance Committee.

Our EMT, which reports on sustainability matters to the board, leads the management and execution of our sustainability priorities within the company. Our Executive Vice President & Chief Financial Officer ("CFO") and the EVP & General Counsel monitor and are responsible for overseeing environmental matters, and our CFO oversees Crown Castle's credit facility and its sustainability-linked key performance indicators. These officers are appointed by the board and report to our Interim President & Chief Executive Officer ("CEO") and the board. Other senior-level officers within Crown Castle are also charged with managing specific sustainability matters.

b. Describe management's role in assessing and managing climate-related risks and opportunities.

Senior management proactively assesses and manages climate-related risks and opportunities. Crown Castle's Vice President—Corporate Finance & Treasurer works with an internal Director of Sustainability to coordinate company-wide sustainability priorities and to keep senior management apprised of potential climate-related initiatives and opportunities, which are identified through engagement with internal business teams, discussions with shareholders and the investment community, and benchmarking analysis. Additionally, senior management identifies and evaluates risks (including climate-related risks) based on their potential materiality, the probability and magnitude of the risk and the risk mitigation measures adopted by Crown Castle. Senior management assesses renewable energy investment and energy efficiency opportunities that (1) align with Crown Castle's overall business strategy and business model and (2) support Crown Castle's climate-related priorities and goals. At least annually, Crown Castle's senior management provides feedback to the Vice President—Audit and Security regarding key risks (including climate-related risks, where relevant) faced by their respective business unit and Crown Castle as a whole.

STRATEGY

a. Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term.

b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning.

For the purposes of this analysis, we have defined short-term ("S") as 0–3 years, medium-term ("M") as 4–10 years and long-term ("L") as 11–30 years.

In the following table, we have summarized the most relevant climate-related risks and opportunities that could impact our business, strategy and financial planning. Our assessment demonstrates that transitional and physical risks are generally immaterial to our business, strategy and financial planning, in large part due to our passive, geographically diversified assets.

Climate-Related Risks

RISK TYPE	DESCRIPTION	POTENTIAL KEY IMPACT(S)	TIME HORIZON	MANAGEMENT APPROACH
Physical Risks				
Extreme weather	Our infrastructure assets could sustain damage from the increased severity and frequency of certain types of extreme weather events or natural disasters.	<ul style="list-style-type: none"> – Increased operating costs – Interrupted or delayed service for our customers – Legal claims or penalties – Damaged or delayed deployment of our communications infrastructure – Disruption in operations – Reputational damage 	M, L	<ul style="list-style-type: none"> – We design our infrastructure to withstand extreme weather events, participate in governmental disaster management programs and conduct weather and disaster simulation tests every six months. – Our network resiliency initiatives are led by our Network Operations Center (NOC) teams, which operate 24/7/365 and monitor and project the impact of extreme weather events. Once assets in harm's way are identified, the NOC teams drive awareness and coordinate communication among the relevant internal groups, while our field operations teams assess vulnerabilities and devise a plan of action to protect our assets. We strategically mobilize essential supplies and technical teams in advance to equip us for an organized and swift response to the disaster. During and after the event, the NOC manages field operations, ensuring that our Field Operations employees are safe and have access to food, fuel, safety gear and lodging. The NOC dispatches technical teams to address damaged infrastructure and communicates with customers and utilities to share information and coordinate repair activities. – We benefit from the geographically dispersed nature of our assets, which are spread out across the US. – Compared to the value of our asset base, the cost of mitigating damage from extreme weather events is minimal. For the three-year period ended December 31, 2024, Crown Castle spent an amount equal to approximately 0.02% annually of its \$30B¹ in property and equipment on repairs and maintenance stemming from extreme weather events.

¹ Gross property and equipment as of December 31, 2024, excluding construction in process.

Climate-Related Risks, cont'd

RISK TYPE	DESCRIPTION	POTENTIAL KEY IMPACT(S)	TIME HORIZON	MANAGEMENT APPROACH
Physical Risks, continued				
Wildfires	Effects of climate change have increased risks and extent of wildfires stemming from “hot work” (including cutting, welding and grinding) conducted on certain of Crown Castle’s sites.	<ul style="list-style-type: none"> – Increased operating costs – Damaged or delayed deployment of our communications infrastructure – Legal claims or penalties – Disruption in operations 	S, M, L	<ul style="list-style-type: none"> – We take proactive steps to address and raise awareness of wildfire risks, including additional rigorous risk management protocols for “hot work” at sites in areas prone to wildfires and mandatory training sessions for our teammates and certain general contractors. – Our dedicated teams monitor daily weather conditions and determine which sites require elevated safety protocols throughout the project. – Additionally, we created a no-weld structural modification solution that helps mitigate risk from on-site hot work. – 100% of contractors performing hot work on sites with an elevated wildfire risk completed a pre-construction check-in where fire prevention procedures were reviewed and observed live.
Transition Risks				
Electricity and fuel costs	The transition to a lower-carbon economy could increase electricity and fuel prices and costs of investment in energy-efficient technology and renewable energy.	<ul style="list-style-type: none"> – Increased operating costs 	L	<ul style="list-style-type: none"> – Our electricity and fuel costs are relatively limited compared to the size of the business. This is inherent to our business model of providing access to our shared communications infrastructure. For the year ended December 31, 2024, Crown Castle’s electricity and fuel costs accounted for approximately 1.7% of our total cost of operations. – We source around 114,000 MWh of renewable energy across 13 states through retail agreements and 30,000 MWh of renewable energy from the Priddy Wind Farm Project and the Pitts Dudik Solar Project, allowing us to both reduce our carbon footprint and receive contracted renewable energy rates for the contract periods, reducing our exposure to energy price volatility.
Current and emerging regulations	Existing and future laws and regulations, including those governing climate and environmental matters, could adversely affect our business.	<ul style="list-style-type: none"> – Increased operating costs – Delays in deployment of our communications infrastructure – Increased regulatory compliance costs 	S, M, L	<ul style="list-style-type: none"> – We monitor applicable policy and legislative and regulatory developments related to climate change and the environment at the local, state and federal levels and create a course of action specific to the area(s) affected, as appropriate. – Recognizing the impact that climate change could have on current and emerging regulations and the market, we are working to reduce our environmental footprint. For example, we have set a goal to be carbon neutral in our Scope 1 and Scope 2 emissions for 2025.

Climate-Related Opportunities

OPPORTUNITY TYPE	DESCRIPTION	POTENTIAL KEY IMPACT(S)	TIME HORIZON	MANAGEMENT APPROACH
Resource efficiency	Upgrade traditional tower lighting systems with LED lighting systems	<ul style="list-style-type: none"> – Energy and carbon savings – Reduced number of site visits and associated fuel consumed by our vehicle fleet 	S, M	<ul style="list-style-type: none"> – Across our portfolio of lit towers where lighting beacons are mandated by law, we have transitioned 7,589, or ~63%, to efficient LED lighting to reduce energy consumption. – LED lighting is 90%² more efficient as compared to traditional lighting and has a five-times-longer life expectancy, resulting in fewer truck rolls for repairs and replacements.
	Increase in number of fuel-efficient and hybrid vehicles within our fleet	<ul style="list-style-type: none"> – Increased fuel efficiency – Carbon savings 	S, M, L	<ul style="list-style-type: none"> – In the ordinary course of business, we continue to improve the fuel efficiency of our fleet. This includes replacing older vehicles, switching to more fuel-efficient engines, and utilizing telematics and other technologies to reduce idling and improve routing for more efficient operations. – In 2024, we realized a 17% reduction in both fuel consumption and Scope 1 emissions by implementing operational changes³ and converting approximately 15% of our fleet to hybrid models, which also resulted in cost savings.
	Invest in building efficiency upgrades at our owned office locations and new leased locations	<ul style="list-style-type: none"> – Energy and carbon savings 	S, M, L	<ul style="list-style-type: none"> – We seek energy efficiency in our owned and leased offices, with 5 ENERGY STAR-certified, 11 LEED-certified offices. For new office spaces, we make efficiency improvements a standard practice by installing LED lighting and water-efficient faucets and commodes. – Our water consumption and waste generation primarily result from our office-related operations. We are taking steps to conserve water and reduce the amount of waste that ends up in landfills. Our current waste reduction initiatives across offices include using recyclable materials, digitizing operations and donating old materials to reduce life-cycle impacts. Our current water efficiency initiatives include selecting drought-tolerant native species for landscaping, using zoned and timed sensors to reduce water use, using reclaimed water for landscape irrigation, and installing energy-efficient appliances and fixtures in connection with our new office buildouts and renovations.
Energy source	Increase use of renewable energy	<ul style="list-style-type: none"> – Energy and carbon savings 	S, M	<ul style="list-style-type: none"> – In 2024, we sourced 144,000 MWh of renewable energy, including 114,000 MWh across 13 states through retail agreements and 30,000 MWh of renewable energy from the Priddy Wind Farm Project and the Pitts Dudik Solar Project—representing ~93% of our annual electricity consumption. This percentage was calculated using 144,000 MWh of renewable energy contracted for 2024 compared with 2024 consumption of 155,665 MWh. – For 2025, we are aiming to achieve 100% renewable energy in support of reaching our goal to be carbon neutral in Scope 1 and 2 emissions.

² According to internal estimates and consistent with data available from [ENERGY STAR](#). ³ Operational changes included staffing adjustments and the modification or cancellation of certain small cell deployments. For more information, please refer to our [8-K filing](#) from June 11, 2024.

STRATEGY

c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

We recently enhanced our internal climate risk management processes by integrating quantitative climate scenario modeling conducted by S&P Global using their Climanomics® software platform, which is aligned with the Task Force on Climate-Related Financial Disclosures (“TCFD”) framework. The analysis considered the unique geographical location, type, ownership model and value of our assets. The resilience of our individual assets was assessed against nine physical hazards under four different climate scenarios⁴:

- Low Emissions (SSP1-RCP2.6): Aggressive mitigation scenario in which total greenhouse gas emission reduce to net zero by 2050, resulting in global average temperatures rising by 1.3–2.4°C by 2100, consistent with the goals of the Paris Agreement.
- Medium Emissions (SSP2-RCP4.5): Strong mitigation scenario in which total greenhouse gas emissions stabilize at current levels until 2050 and then decline to 2100. This scenario is expected to result in global average temperatures rising by 2.1–3.5°C by 2100.
- Medium-High Emissions (SSP3-RCP7.0): Limited mitigation scenario in which total greenhouse gas emissions double by 2100 and global average temperatures rise by 2.8–4.6°C by 2100.
- High Emissions (SSP5-RCP8.5): Low mitigation scenario in which total greenhouse gas emissions triple by 2075 and global average temperatures rise by 3.3–5.7°C by 2100.

Average annual loss for these scenarios was modeled over decadal intervals from the 2020s to the 2090s. Physical hazards assessed include wildfires, tropical cyclones, coastal flooding, pluvial (rainfall) flooding, fluvial (river) flooding, drought, temperature extremes, water stress and landslides.

According to S&P Global's analysis, our tower portfolio is resilient under the assessed emission scenarios and is not expected to face material physical climate risks in the short-, medium-, or long-term. The estimation of increased financial impact was projected to be minor—an incremental \$5M annually through the 2030s, rising to \$7M in the 2040s–2050s, and \$10M annually from the 2060s through the 2090s—equating to just 0.02%–0.03% of our \$30B net property and equipment value as of year-end 2024. These projections align with the historically immaterial losses incurred to date. Based on this analysis, the increased modeled average annual losses are not expected to have a material impact on our business strategy, results of operations, or financial condition.

Physical Climate Hazards ⁵	Hazard Type	High Emissions Scenario (SSP5-RCP8.5)			Medium-High Emissions Scenario (SSP3-RCP7.0)			Medium Emissions Scenario (SSP2-RCP4.5)			Low Emissions Scenario (SSP1-RCP2.6)		
		2020s–2030s	2040s–2050s	2060s–2090s	2020s–2030s	2040s–2050s	2060s–2090s	2020s–2030s	2040s–2050s	2060s–2090s	2020s–2030s	2040s–2050s	2060s–2090s
Wildfire	Chronic	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Tropical cyclone	Acute	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Coastal flooding	Acute	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Pluvial flooding	Acute	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Fluvial flooding	Acute	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Drought	Chronic	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Temperature extremes	Chronic	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Water stress	Chronic	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Landslide	Acute	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low

⁴ These scenarios follow internationally recognized standards, including those of the Intergovernmental Panel on Climate Change (“IPCC”). The wording is per Climanomics® but reflects global climate models, including the Shared Socioeconomic Pathways (“SSPs”) and Representative Concentration Pathways (“RCPs”). ⁵ Physical hazard data is based on a variety of resolutions, baseline periods, variables, and sources, as defined by the S&P Global Climanomics® Methodology. Source data includes CMIP6, NEX-GDDP, the World Resources Institute, Kopp et al. (2014), Muis et al. (2016), World Wildlife Fund (“WWF”), Hydro-BASINS, North Atlantic Stochastic Hurricane Model (“NASHM”), Hall et al. (2021), and Kirschbaum et al. (2008). ⁶ “Low” risk indicates that modeled annual average loss (“MAAL”), expressed as a percentage of asset value, remains below 1% relative to the historical baseline for each hazard. Risk exposure classification thresholds are defined as: High > 5%, Moderate = 1%–5%, and Low < 1% of asset value. This relative risk metric reflects both exposure and vulnerability, independent of asset valuation. All values are derived from Climanomics® outputs and represent the expected change in financial risk due to climate change.

While the findings indicate no material financial impact, they have been analyzed and considered within our growth strategies and risk management practices, positioning us to mitigate potential climate impacts in future decades and continue reliably serving our customers. We remain committed to prudent risk oversight and long-term infrastructure resilience in the context of evolving climate-related considerations.

As detailed above, we have also assessed transition risks, including potential changes in electricity and fuel costs, as well as current and emerging climate-related regulations. Given our shared infrastructure business model, these costs are relatively limited—accounting for approximately 1.7% of our total cost of operations in 2024—and are not expected to materially impact our financial performance. We mitigate exposure through long-term renewable energy agreements and actively monitor regulatory developments to ensure timely, location-specific responses. Our commitment to environmental responsibility includes a goal to achieve carbon neutrality in Scope 1 and Scope 2 emissions for 2025, further strengthening our resilience to transition-related risks.

RISK MANAGEMENT

a. Describe the organization's processes for identifying and assessing climate-related risks.

We identify and assess climate-related risks in connection with our broader enterprise risk assessment. When evaluating the materiality of climate-related risks in relation to other risks, the board and senior management consider (in no order of priority): (1) with respect to both transition and physical risks, (a) the financial impact (considering insurance coverage and availability of capital, as applicable) and (b) input from key stakeholders, and (2) with respect to physical risks, the extent of (a) potential damage and necessary repair activities resulting therefrom and (b) any disruption to operations and the ability to support our customers.

In the case of extreme weather events, Crown Castle's NOC teams, which monitor extreme weather events, keep senior management apprised of the projected impact of impending extreme weather events, and the actual impact once Crown Castle's technical teams have had an opportunity to assess the resulting damage. Additionally, other business teams keep senior management informed of the short- and long-term financial implications of such events, and the financial implications of any regulatory compliance or significant shift in sentiment from key stakeholders stemming from transition risks.

b. Describe the organization's processes for managing climate-related risks.

Management of Physical Risks

Crown Castle's resiliency efforts play a key role in managing physical risks. Through disaster preparedness protocols and training, periodic assessments of Crown Castle's infrastructure, design and deployment considerations and network resiliency initiatives, we are able to reduce the extent of our exposure to such risks.

Company-wide engineering practices contribute significantly to the resilience of Crown Castle's assets to extreme weather events, regardless of the geographic location of such assets. For example, while design standards vary based on location, Crown Castle's tower portfolio is generally designed to withstand a 700-year wind event with customer equipment additions. Extreme weather events typically have relatively limited financial impact across Crown Castle's total asset base. In addition, the geographically dispersed nature of Crown Castle's assets helps mitigate the impact from any single extreme weather event or extreme weather events concentrated in one geographic region, even if such events were to increase in frequency or severity.

Where the measures discussed above are not adequate to protect Crown Castle's assets, we obtain insurance coverage to offset a portion of the cost of any resulting damage and subsequent repair costs. Where existing resiliency efforts, the geographically dispersed nature of our assets, and insurance coverage are insufficient to address existing or projected physical risks, Crown Castle evaluates additional measures or the expansion of existing measures and adjusts its operations and protocols accordingly.

Risk Management, cont'd

Management of Transition Risks

While electricity and fuel costs have had limited financial impact on our cost structure, Crown Castle has implemented or explored various measures to manage transition risks. This includes investing in energy-efficient technology used in operations, exploring opportunities to improve the fuel efficiency of our fleet, pursuing renewable energy procurement opportunities and evaluating other investments in renewable energy.

Additionally, Crown Castle's US-based portfolio benefits from the availability and general reliability of the US electric grids and contributes to transition risk mitigation. Generators are primarily used to provide backup power and only account for approximately 3% of our Scope 1 and location-based Scope 2 emissions. Availability of renewable energy solutions in the US provides an opportunity for Crown Castle to achieve its carbon neutral goal in Scope 1 and 2 emissions for 2025.

c. Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.

The identification, assessment and management of climate-related risks are fully integrated into our established enterprise risk management framework. Specifically, we have incorporated four climate-related questions within our annual risk assessment survey that are designed to prompt respondents, which include senior- and executive-level leaders, to ensure that they are contemplating climate-related risks to our assets, operations and financial performance.

METRICS AND TARGETS

a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.

b. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.

Crown Castle measures, reports and tracks its energy and fuel consumption, together with associated emissions (namely, Scope 1 and Scope 2 emissions), to aid in the assessment of climate-related risks and opportunities. For 2024, we built upon the foundation of our first comprehensive Scope 3 emissions inventory, continuing to report on the categories that are relevant to our business. This analysis has confirmed the most significant drivers of our value chain emissions and highlighted areas where we may be able to impact future reductions. Refer to the [Environmental Data Tables](#) for our comprehensive emissions inventory.

c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Crown Castle has a goal to achieve carbon neutrality in its Scope 1 and Scope 2 emissions for 2025. We are approximately 76%⁷ of the way to reaching our carbon neutral goal by investing in projects that benefit both our business and the environment, such as converting our tower lighting to LED and sourcing renewable energy, and we believe we are on track to achieve it for 2025. In addition, Crown Castle is exploring other opportunities to reduce energy and fuel consumption across its business and increase sourcing of renewable energy.

We are working with our customers and suppliers to formulate strategies in an effort to reduce Scope 3 emissions across our entire value chain. The emissions stemming from our customers' energy consumption on our infrastructure assets represent nearly 80% of our Scope 3 footprint. We collaborate with our biggest customers to ensure alignment on sustainability priorities, and as they advance efforts to decrease their Scope 1 and 2 emissions through operational changes and sourcing of renewable energy, our market-based Scope 3 emissions are also expected to decrease.

⁷ Percentage calculated based on the difference between (i) 2024 Scope 1 and market-based Scope 2 emissions of 15,387 MTCO₂e and (ii) 2024 Scope 1 and location-based Scope 2 emissions of 63,488 MTCO₂e, divided by 2024 Scope 1 and location-based Scope 2 emissions of 63,488 MTCO₂e.