CHARTER COMMUNICATIONS, INC.

2021 Environmental, Social and Governance (ESG) Report

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Letter From Our CEO

At Charter Communications, we believe that serving our more than 32 million customers and supporting our more than 93,000 employees means going beyond delivering best-in-class Internet, TV, mobile, and voice services. It means being hyperlocal, from expanding our network to connect more homes and businesses, to the news we bring our viewers each day, to hiring a diverse and inclusive workforce and providing career opportunities, and being active members of the communities we serve. Last year, we introduced Charter's first Environmental, Social and Governance ("ESG") report and responded to the CDP Climate Change Questionnaire for the first time. I am pleased to introduce Charter's 2021 report.

Our ESG efforts continue to be structured in a comprehensive three-pillar framework to reflect how our business drives sustained value in a virtuous cycle. By investing in a highly skilled workforce, we are able to deliver a superior network that connects communities. The services we deliver are important in the lives of our customers and the communities we serve, which is why we established the following goals to help create long-term value through sustainable connectivity:

- Drive efficiency by achieving **carbon neutrality** in our operations **by 2035**

- Continue to build a highly skilled workforce reflecting the diversity of the communities we serve by **increasing the starting minimum wage of all hourly employees to $20 per hour in 2022**
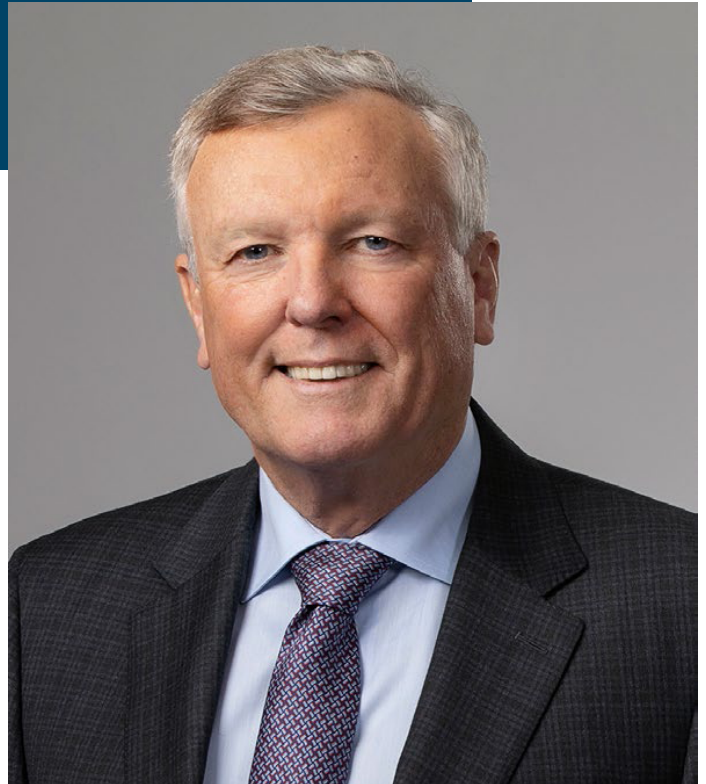
- Provide better, safer connectivity and control for our communities by making our **Advanced Home WiFi platform available to 100% of Internet serviceable homes passed in 2022**, which allows customers to optimize their home networks with detailed visibility and control over connected devices

- Expand our network to provide **high-speed broadband access to one million unserved and underserved rural customer locations** by investing **over $5 billion over the next six years** through our rural construction initiative

- Invest **$30 million** to improve **100 rural and urban community centers** that provide job skills training over the next **five years, benefiting 50,000 people** in the communities we serve
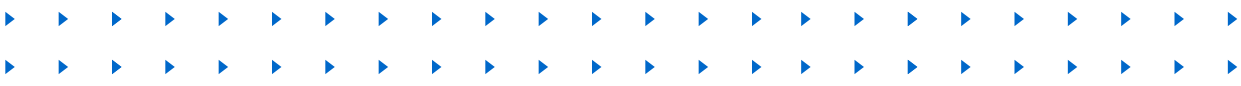
We made significant progress towards our goals in 2021 and have achieved two of them early in 2022. We now offer a starting minimum wage of at least $20 per hour, including target commissions, and our Advanced Home WiFi product is now available to 100% of Internet serviceable homes passed. Since our last report, we commenced our multiyear, multibillion dollar rural construction initiative, launched our philanthropic initiative to revitalize community centers in the communities we serve, and developed strategies to realize our carbon neutral goal related to electric energy efficiency, renewable energy, and fleet fuel efficiency.

This year's ESG report describes Charter's actions that support achieving carbon neutrality and the investments we make in the diverse communities where we operate and

our employees live and work. We believe the information provided in this report demonstrates to all our stakeholders the important role these efforts play in Charter's business strategy and how our performance in these areas contribute toward positioning Charter for continued success.

Thomas M. Rutledge
Chairman and Chief Executive Officer

Our ESG Approach

As a leading broadband connectivity company and cable operator, we create long-term value for our stakeholders through the efficient delivery of our services across our 41-state footprint. We recognize that by investing in a highly skilled workforce, we are able to deliver superior products and services over an advanced network to bring sustainable connectivity to our customers and their communities.

ESG framework

A Highly Skilled Workforce, a Superior Network, and Connected Communities underpinned by strong governance constitute our ESG framework. These pillars define our ESG priorities, set a foundation for our ESG goals, and reflect important aspects of our overall business strategy.

Charter developed this framework in 2020 through a detailed review of leading ESG standards reflecting stakeholder priorities paired with feedback across the organization to identify and inform our approach. We began with an initial set of topics from a number of leading, industry-specific sustainability standards, including the Sustainability Accounting Standards Board ("SASB"). We combined these standards with the findings of a comprehensive peer assessment, existing programs at Charter, and a broad executive engagement

effort across our business groups to identify ESG priorities in relation to our operations. These topics were then validated by our internal ESG Operating Steering Committee ("OSC") and Executive Steering Committee ("ESC"), as well as our Board of Directors (the "Board"), and subsequently synthesized into a cohesive approach that articulates our areas of focus (see ESG governance). In 2021, we reviewed our framework against recent ESG stakeholder developments to confirm our priorities and reporting approach, and to make sure our efforts and initiatives are consistent with stakeholder expectations and our objective to create long-term value through sustainable connectivity.

We create long-term value by building sustainable connectivity through a virtuous cycle that begins with investing in a highly skilled workforce. Our workforce enables us to deliver superior products and services over an advanced network, connecting our customers and their communities.

Connected Communities

» Investing in the communities we serve

» Protecting customer data, privacy, and security

» Expanding access to our products and services
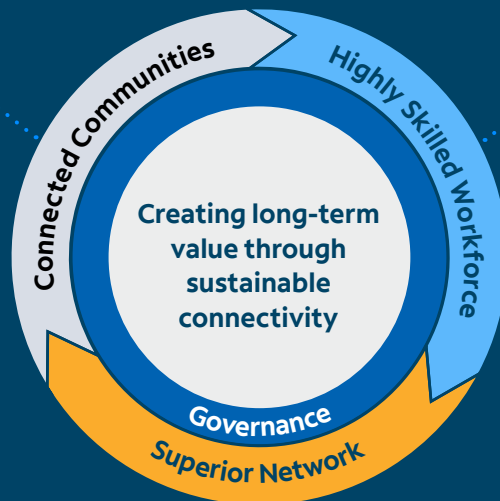
Highly Skilled Workforce

» Training and investing in our employees to be masters of their craft

» Enabling a diverse and inclusive culture

» Focusing on a safe and healthy workplace

Creating long-term value through sustainable connectivity

Connected Communities • Highly Skilled Workforce • Governance • Superior Network

Superior Network

» Continuously upgrading the resilience and reliability of our network

» Investing in the efficiency of the network to provide affordable services

ESG metrics and targets

Charter has formalized a number of operating metrics within each pillar of our framework to track and measure performance across our ESG focus areas. The table below highlights our efforts during fiscal years 2021 and 2020 (ended December 31, 2021 and 2020), unless otherwise noted. The table also summarizes our goals, which are set out in more detail in the report. We will begin reporting on metrics associated with our newly established goals in our 2022 report.

FOCUS AREA	METRIC[1]	2021	2020
Highly Skilled Workforce			
Training and investing in our employees to be masters of their craft	Total number of aggregate training hours	7.1 million hours	5.1 million hours[2]
	Total number of learning experiences (e.g., courses) available at Charter	94,635 learning experiences	81,180 learning experiences
	Total dollars invested in training	$277 million	$209 million[2]
	Percentage of hourly employees who make at minimum $20 per hour	70%	55%
		✔ **ACHIEVED IN 2022** GOAL: Increase the starting minimum wage of all hourly employees to $20 in 2022	
Enabling a diverse and inclusive culture	Diverse representation by race and ethnicity[3]	Total diverse representation by race and ethnicity: 49% Black/African American: 21% Hispanic/Latino: 18% Asian: 5%	Total diverse representation by race and ethnicity: 48% Black/African American: 21% Hispanic/Latino: 17% Asian: 4%
	Percentage of the workforce that is female	33%	34%
Focusing on a safe and healthy workplace	Total recordable injury rate ("TRIR")[4]	2.2	2.4
Superior Network			
Continuously upgrading the resilience and reliability of our network	Dollar investment in infrastructure and technology	$7.6 billion	$7.4 billion
Investing in the efficiency of the network to provide affordable services	Greenhouse gas ("GHG") emissions from our operations	1,433,532 MT CO_2e	1,474,549 MT CO_2e
		••• **IN PROGRESS** GOAL: Reach carbon neutrality in our operations (scope 1 and 2 GHG emissions) by 2035	
	GHG emissions from our value chain[5]	1,007,783 MT CO_2e	1,014,670 MT CO_2e
Connected Communities			
Investing in the communities we serve	Community centers improved	••• **IN PROGRESS** GOAL: Invest $30 million to improve 100 urban and rural community centers that provide job skills training over the next five years	
Protecting customer data, privacy, and security	Percentage of Internet serviceable homes passed where Advanced Home WiFi capability is available	Over 96%	Over 65%
		✔ **ACHIEVED IN 2022** GOAL: Make our Advanced Home WiFi platform available to 100% of Internet serviceable homes passed in 2022	
Expanding access to our products and services	Additional homes and businesses provided with broadband access	1.1 million	1.1 million
	Rural customer locations provided with broadband access as part of our rural construction initiative	••• **IN PROGRESS** GOAL: Expand our network to provide high-speed broadband access to one million unserved and underserved rural customer locations by investing over $5 billion over the next six years through our rural construction initiative	

[1]   Please see each respective section of this report for more information and methodologies for these metrics. Percent values are rounded to the nearest whole number.

[2]   Training hours and training dollars for the year ended December 31, 2020 have been updated to reflect current year methodology.

[3]   Total diverse representation includes all race and ethnicity categories (including Native Hawaiian/Pacific Islander, Native American/Alaska Native, and two or more races in addition to the categories listed).

[4]   The total recordable incident rate ("TRIR") represents a measure of the Company's safety performance and is calculated in accordance with OSHA's methodology. Please see Focusing on a safe and healthy workplace for further details.

[5]   Please see Understanding our sources of GHG emissions to read more about the value chain categories we include and an overview of our calculation methodologies.

ESG governance

The Nominating and Corporate Governance Committee is responsible for oversight of the Company's efforts with regard to ESG matters. The ESC and OSC are both chaired by Charter's General Counsel and are composed of leaders from across our operations, including Accounting, Business Planning, Communications, Community Impact, Corporate Finance, Corporate Services, Diversity & Inclusion, Government Affairs, Human Resources, Investor Relations, Legal, Network Operations, Policy, and Sustainability.

The ESC is composed of senior-level management responsible for overseeing and determining the direction and ambition of key ESG program areas. The ESC oversees the work of the OSC to align our programs and disclosures with Charter's values and business goals. In 2021, the ESC typically met monthly and the Company's ESG and climate strategy progress was reported regularly to the Chairman and Chief Executive Officer and quarterly to the Nominating and Corporate Governance Committee.

The OSC, which met at least monthly in 2021, consists of program leaders related to our ESG areas of focus. The OSC provides input on the Company's ESG framework, assists with the establishment and tracking of ESG metrics, and guides the Company's approach with respect to ESG programs and disclosures. The Climate Committees operate as subcommittees of the OSC and are focused on the collection and review of GHG data as well as initiatives related to our climate change strategy (see Climate governance).

In addition to the Nominating and Corporate Governance Committee responsibilities defined above, the full Board has delegated ESG-related responsibilities to various committees. The Audit Committee reviews our Enterprise Risk Management ("ERM") program on a regular basis, which includes reviewing threats to our network and our business, such as cybersecurity and business continuity risks, including extreme weather. The Board regularly reviews reports from management and the Audit Committee regarding the ERM program. The charter of the Compensation and Benefits Committee (the "Committee") delegates to the Committee the oversight of diversity and inclusion. The Committee and our Board receive annual updates from our Chief Diversity & Inclusion Officer. In 2021, the Committee also tied 50% of the bonus potential for Charter's Chairman and Chief Executive Officer directly to Charter's strategic objectives of talent planning (40%) and diversity and inclusion (10%) given the importance of building a strong and diverse talent pipeline. The Board also regularly discusses Charter's competitive positioning, strategic dynamics, and business priorities with management and advises management with respect to our strategy for each of our business areas.

Highly Skilled Workforce

Our operating strategy includes insourcing nearly all of our customer care and a substantial portion of our field operation workforces. The investments we make to acquire, retain, and develop our workforce directly impact the quality of our service delivery and our ability to connect and retain customers.

Training and investing in our employees to be masters of their craft

Charter recognizes that a professional, skilled workforce is vital to our success. This belief is reflected in our Company's values of employees being experts in their field and pursuing continuous growth and learning. As a service organization, our employees take personal responsibility for meeting our shared goals and fulfilling our commitments as they strive to be masters of their craft. In 2021, Charter invested approximately $277 million in training,[6] offering a wide array of talent development programs, from entry-level skills training to management and leadership development.

Our Corporate Learning organization regularly assesses the broader learning needs of the business through the Learning Council. The Learning Council, which includes representatives from Corporate Learning and each business unit, meets monthly to identify skill development opportunities to benefit our entire organization. In 2021, the training content curated included several topics, such as presentation skills, giving and receiving feedback, and productive habits.

Employer of choice recognition

Charter, under the Spectrum brand, was recognized as a top employer on several occasions in 2021, including Forbes' "Best-In-State Employer" for CO, CT, KY, MO, and NC, and WayUp's "Top 100 Internship Program."

Training management

Each major business unit has a learning organization that manages and maintains role-specific training for employees, from new hires to supervisors. Our Corporate Learning organization supports broader, cross-functional learning initiatives with tools, resources, and technology infrastructure. By leveraging this distributed learning model, employees are immersed in role-based training within their business units (e.g., customer service, field operations, and sales) and supported at the corporate level for more universal needs. This approach allows more agility for the business units to quickly train employees on specific tools or skills as those tools and needed skills evolve, while our corporate function supports enterprise-wide tools, processes, and leadership programs for the broader organization's needs.

Broadband Technician Apprenticeship Program

One of our most successful ongoing programs is our Broadband Technician Apprenticeship Program. This highly regarded program, certified by the U.S. Department of Labor, is aligned with our broadband technician career progression and includes thousands of hours of on-the-job training and classroom instruction.

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[6] This metric includes departmental training expenditures, learning system expenditures, salaries for dedicated learning personnel, and total training salary cost. To prevent undue skewing of the training salary cost, only salaries for staff below the Vice President level are included, with the assumption being that most training hours come from those employees.
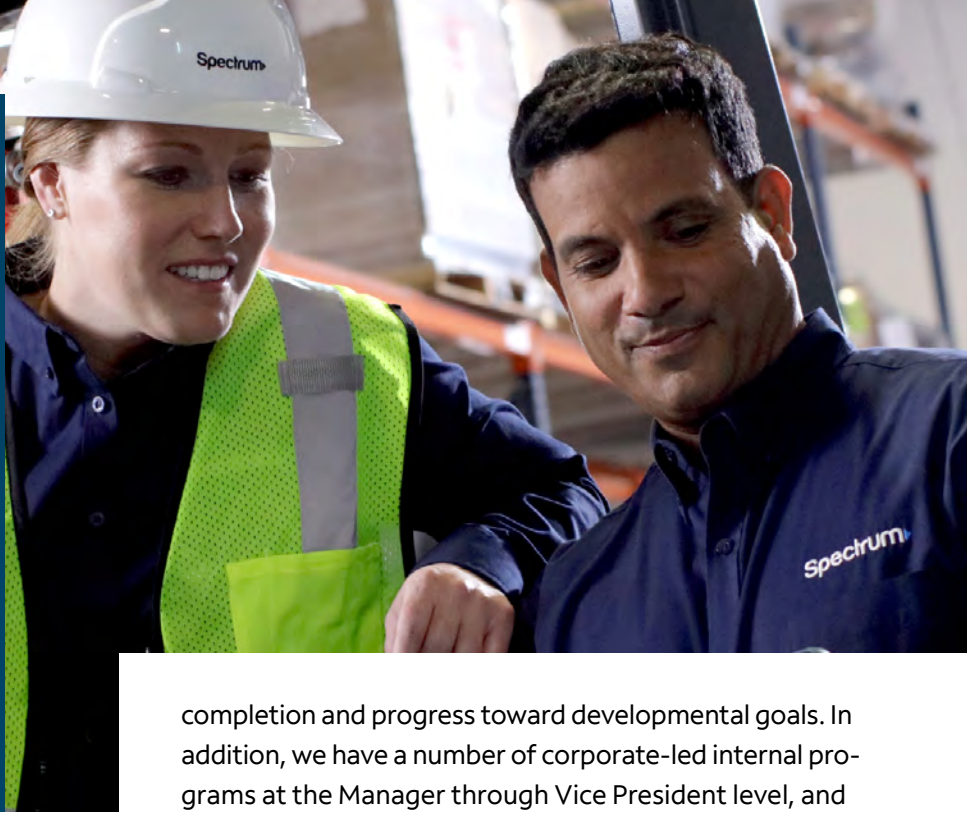
Training by the numbers in 2021

Total number of learning experiences available at Charter:

94,635

Total number of aggregate training hours:

7.1 **million hours**
(includes full-time and part-time employees)[7]

We offer more than 94,600 learning experiences spanning leadership development, new hire, and professional skills training. In 2021, we added over 13,000 new learning experiences, with the majority being online offerings. Our Company-wide Learning Management System has the ability to view formal learning activity, including completion rates and evaluations on training and development experiences, to provide full-time and part-time employees, as well as management, a comprehensive view of progression. Learners can assess any training course they complete with a star rating between one and five. In addition, online surveys generated upon course completion allow learners to offer additional feedback, including content usability, relevance, and business impact. These training evaluations are used to follow up and make improvements as needed. A cross-functional team meets monthly to manage and maintain the shared structure and use of the system.

Charter offers a variety of standard and customized leadership development programs, resources, and curricula for each business unit and job level. Some business units have frontline and mid-level leadership programs that are tailored to unique business challenges, while others leverage corporate-provided leadership content in an open enrollment format. Employees are encouraged to use an Individual Training and Development Plan, a tool within the Learning Management System, to track course completion and progress toward developmental goals. In addition, we have a number of corporate-led internal programs at the Manager through Vice President level, and multiple opportunities for Supervisors to quickly augment their skills with online courses on topics such as business applications, productivity tools, and communication and management skills. In 2021, we designed and launched a new program for top talent, mid-level leaders called the Director Leadership Development Program. In addition, we partner with external organizations to supplement our learning offerings as outlined below. Our leadership programs and offerings continue to evolve each year based on business needs. For example, we initiated integrating inclusive behaviors in our leadership development programs, enabling employees to enhance their skills working in and leading diverse and inclusive teams.

Learning partnerships

Our learning offerings are supplemented by programs provided through organizations such as the Center for Creative Leadership, the Cable and Telecommunications Association for Marketing, and the Society of Cable Telecommunications Engineers. For additional leadership development opportunities, we also partner with key diversity organizations such as Women in Cable Telecommunications and the National Association for Multi-ethnicity in Communications.

[7] This metric only includes trainings occurring within the Company-wide Learning Management System. Trainings occurring outside of the Learning Management System are excluded.

Tuition assistance

We recognize that development through education is an integral part of our workforce's personal and professional growth and as such, we financially invest in employees seeking degrees and certifications. Through our Education Assistance Program, Charter will pay up to $5,250 in a calendar year for expenses incurred from pursuing a degree at an accredited college, university, or trade school when the program is related to the full-time employee's current role or will prepare them for a future role at Charter.

Performance management

In addition to encouraging a culture of continuous learning, Charter annually evaluates all merit-eligible employees through a formal performance management review process that focuses on overall job effectiveness and behaviors. Depending on the role, job effectiveness can be measured against annual goals, key effectiveness areas, or scorecard metrics. Behaviors addressed in the performance management process for employees include communication, relationship building, and demonstration of flexibility. People leaders are evaluated on managing and developing their teams, with those at the Director level and above also measured on supporting diversity and inclusion initiatives. Several business units participate in employee engagement surveys that solicit feedback on key areas of focus within their group. The business units then follow this survey process with action planning at the business unit leader level to address concerns and improve engagement.
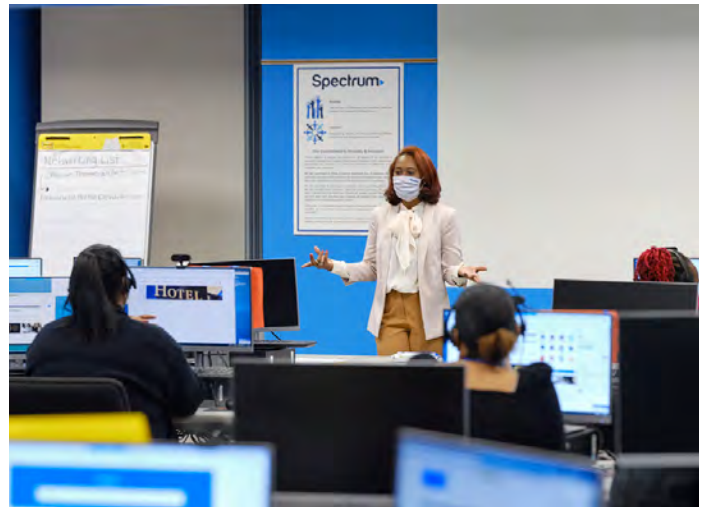
Succession and talent planning

As we look to the future, we recognize the ongoing need to further strengthen and diversify our leadership pipeline. When recruiting external talent for leadership positions, we prioritize diverse slates, leveraging technologies, programs, and tools to identify and source diverse talent. When assessing our internal talent, each business unit participates in an annual talent planning process to review the overall performance of our leaders and their potential to serve in larger, more complex roles. These discussions also support succession and development planning to ensure we continue to strengthen and diversify our workforce for the future. Potential successors are identified on an annual basis for all roles at the Vice President level and above. Executive leadership reviews the results of talent conversations, which open possibilities for career growth opportunities and cross-organizational movement. In 2021, we promoted three Executive Vice Presidents internally who were identified through our succession and talent planning process, and an additional three in January 2022.
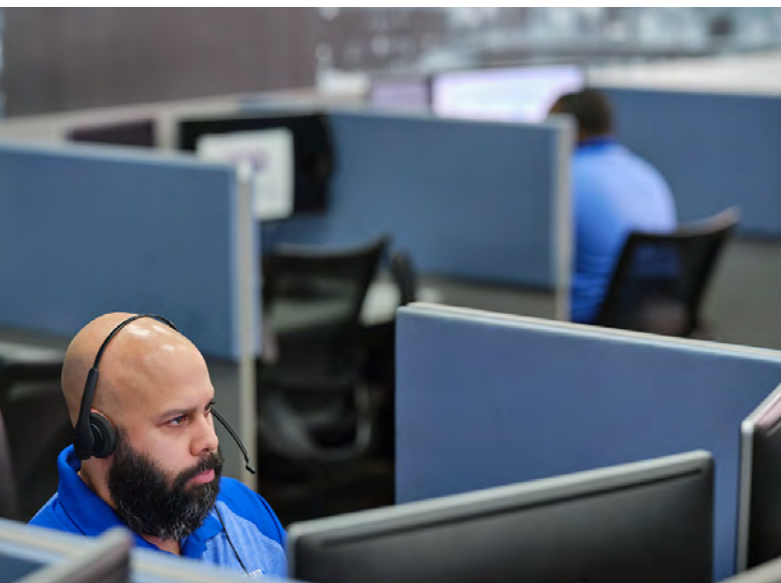
Benefits and pay

We believe in offering a comprehensive compensation and benefits package that rewards employees for their contributions to our success, supports all aspects of their well-being, and delivers real value at every stage of life. Our total rewards programs include competitive wages, robust healthcare benefits, free Spectrum video, Internet, and voice, and a generous retirement program. Charter's total compensation package is designed to attract and retain talent and provide holistic support to employees throughout their career with Charter.

Health and well-being

We provide high-quality, comprehensive medical, dental, and vision coverage for all full-time and part-time employees.[8] It is our priority to keep this coverage affordable for our employees and their families, and so for the last nine years, we have absorbed the full cost increase for medical, dental, and vision coverage. As a result, an employee who has been with Charter during this time period has saved nearly $8,600 on average. We contribute up to $1,500 per year into a healthcare account to help employees and their families pay for qualified healthcare expenses, and we offer no-cost health improvement programs, including diabetes management, planned surgeries, and second medical opinions. In addition, we provide market-leading benefits designed to support the diverse needs of our employees. Charter offers family-building benefit options for our LGBTQ employees and comprehensive health benefits to our transgender employees to support their physical and emotional well-being.
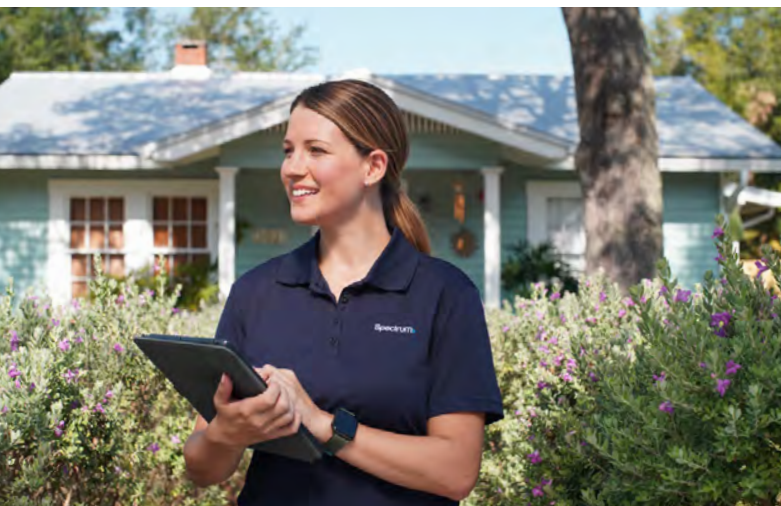
Raising our starting wage to $20 an hour

Percentage of our hourly employees making, at minimum, $20 per hour[9]

12/31/2020	**55%**
12/31/2021	**70%**
As of this report	**100%**
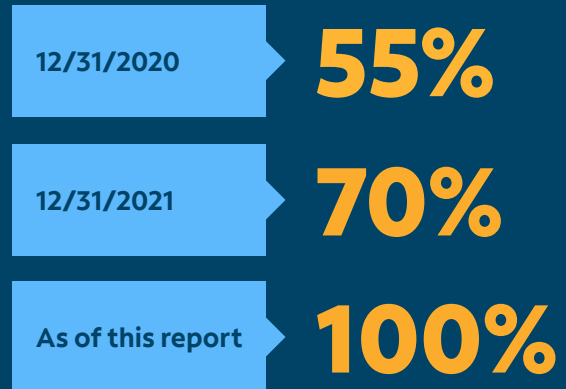
Starting wage and compensation

In addition to our health and well-being programs, we offer competitive starting wages with significant incentive compensation and annual earnings potential based on specific roles. In April 2020, we committed to a $20 per hour starting minimum wage for all hourly full-time and part-time employees in 2022. To accomplish this, we increased our starting minimum wage to $16.50 per hour in 2020, and then to $18 per hour in 2021. In the first quarter of 2022, we achieved our goal of all hourly employees having a starting minimum wage of at least $20 per hour, which is well above any state or federal minimum wage levels.

Nearly 80% of our employees are eligible for additional variable compensation based on their performance (e.g., annual performance bonus or sales commissions). Charter's equity incentive plan also covers over 4,000 leaders in roles at or above the Director level, and awards are granted pursuant to the action of the Compensation and Benefits Committee.

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8 | Includes part-time employees who are regularly scheduled to work more than 25 hours per week.

9 | The calculation of this metric includes target commissions for commission-based employees.

Savings and retirement

All employees are eligible to participate in our retirement program and new hires are automatically enrolled. For every dollar our employees put into their 401(k), we match dollar for dollar up to 6% of their eligible pay. On top of that, all employees below the Director level (approximately 94% of our workforce) are also eligible to receive an additional Company non-elective contribution equal to 3% of their eligible pay that goes into a Retirement Accumulation Plan (RAP). Together, these Charter contributions deliver a market-leading savings and retirement program for our employees.

Paid time off, leave, disability, and financial protection

Beyond our core benefits, we provide a suite of non-compensation benefits and programs to help our employees balance work and life, including paid time off for holidays, vacations, and illness, along with paid parental leave. Full-time employees are eligible for seven observed holidays, four personal days, seven sick days (which can be accrued up to a maximum of 520 hours), and 10 to 25 vacation days based on tenure. Up to 80 hours of vacation time can be carried over to the following calendar year. Part-time employees are eligible for seven observed holidays, two personal days, up to seven sick days and five to 12.5 vacation days based on tenure. Full-time employees are also eligible for two weeks of paid parental leave in the 12 months following the birth or adoption of their child.

For illness or injury recovery, full-time employees are eligible to receive short- and long-term disability income replacement benefits to support their recovery. Birth mothers receive eight weeks of short-term disability income replacement benefits in addition to the two weeks of paid parental leave. Full-time employees also receive basic life and accidental death and dismemberment insurance at no cost.

Beyond state and federal leave requirements, we offer additional personal unpaid leave when an employee needs time away for non-medical reasons. Charter also supports our military members by providing differential pay for up to one year while serving our country on military leave.

Family support services

We recognize the journey to parenthood is different for everyone. Charter offers fertility benefits for our employees and their dependents that includes treatment, preservation, and surrogacy so that all employees, including our LGBTQ community members, have an opportunity to build a family. We also have family planning support programs and tools, along with financial support and reimbursement for costs associated with adoption and surrogacy. Charter provides nursing mothers with a concierge service to express ship refrigerated breast milk while traveling on business. Parents and caregivers raising children with learning, behavioral challenges, or developmental disabilities have exclusive resources to help them understand, teach, and better communicate with their children. Charter offers employees access to discounted child care, paid parental leave, pre-tax dependent care savings accounts, and elderly caregiving support.
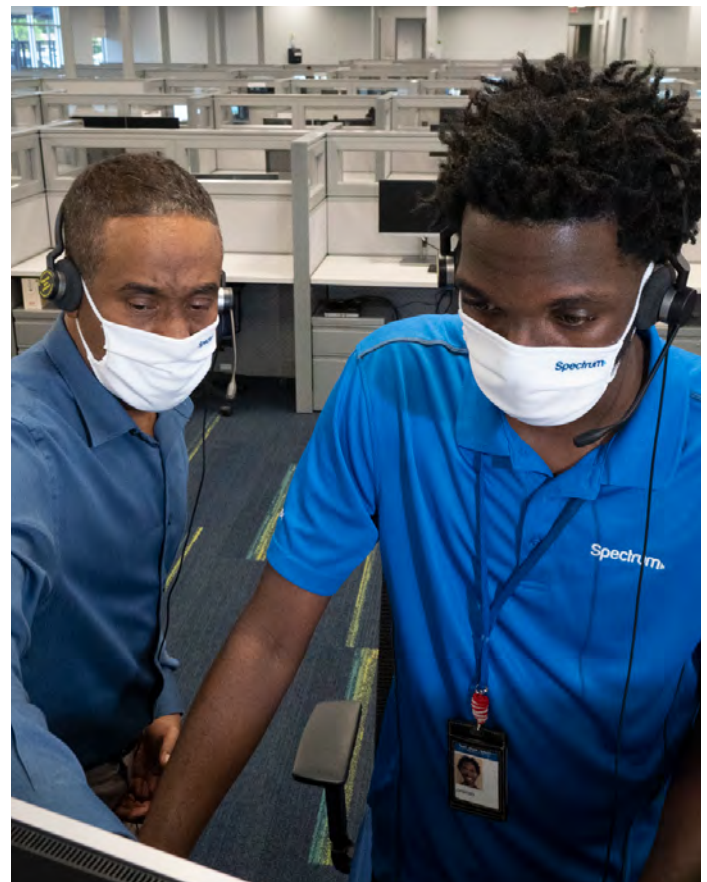
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Ethical conduct

Charter's success has been, and will continue to be, driven by our dedicated employees who combine the highest level of craftsmanship and quality of service with the highest ethical standards. Charter's Code of Conduct, Financial Code of Ethics, and Employee Handbook provide the foundation for ethical conduct and business practices for the Company and all subsidiaries. As part of our Workplace Expectations learning program, all employees (including part-time employees) are trained on the Code of Conduct upon hiring, and again biennially. As part of the course, employees provide written confirmation that they have read and understood the Code of Conduct and Employee Handbook documents. Charter also has a Conflict of Interest policy that applies to all employees, and we require that Director-level employees and above annually review, complete training, and certify compliance with that policy. All employees are required to complete training courses on relevant privacy laws, data security, and the protection of customer proprietary network information, among others. The Audit Committee of the Board oversees corruption issues, business ethics, and financial practices and receives updates, including in executive sessions, from Internal Audit executives and the General Counsel.

Our policies and our culture promote open feedback, but we also offer a 24-hour hotline, maintained by a third party, that allows whistleblowers, employees, contractors, vendors, customers, and others to raise concerns anonymously. The Company's Open Door Policy also encourages reports to be made directly to Human Resources, and the policy prohibits retaliation against any individual who, in good faith, seeks advice, raises a question, reports misconduct, or participates in an investigation of a potential Code of Conduct violation. Employees are made aware of the Open Door Policy and hotline options during their onboarding and are periodically reminded of these resources through notifications and our Workplace Expectations learning program.

Reports of potential unethical behavior are investigated by Corporate Compliance, Internal Audit, Corporate Physical Security, Employment Relations, or others at the direction of Charter's Corporate Compliance team, in accordance with the Workplace Investigations Policy.

Corrective actions are taken in accordance with Charter's Corrective Action Guidelines. Additionally, the Company performs regular risk assessments intended to identify and deter potential unethical behavior or instances of non-compliance.

In dealing with public officials, other corporations, and private citizens, we firmly adhere to our ethical business practices as laid out in our Code of Conduct. The Company's Anti-Bribery Policy and Federal Contracting ("FC") Policy, both of which cover all employees and subsidiaries, define bribery as "something of value given with the intent to influence an official act" and facilitation payments as "a payment made with the purpose of expediting or securing performance of a Government action by a Government Employee, political party, or party official." Our Anti-Bribery and FC policies place a strict prohibition against influencing others by paying bribes, either directly or indirectly. All employees are responsible for avoiding and reporting situations involving bribery or corruption, and the General Counsel and Corporate Compliance team are tasked with overseeing allegations and/or investigations regarding these offenses.

Enabling a diverse and inclusive culture

Charter's network passes more than 54 million households and businesses, serving over 32 million customers in countless urban, suburban, and rural communities across our country. The diversity of the communities we serve is reflected in our workforce, and our success in serving these communities requires a commitment to diversity and inclusion in every aspect of our business. At Charter, we value the unique backgrounds, perspectives, and experiences of our employees and partners. Embracing these differences brings us together for the common mission of exceeding our customers' needs.

Led by Charter's Chief Diversity Officer, the Company's governance structure promotes shared accountability and responsibility for diversity and inclusion through an Executive Steering Committee for Diversity & Inclusion ("Steering Committee") and our External Diversity & Inclusion Council ("EDIC"). Charter's CEO chairs the Steering Committee, representing the Company's executive leadership team, which meets quarterly. In 2021, the Steering Committee created three subcommittees focused on a subset of our strategic pillars, including People, Culture of Inclusion, and Supplier Diversity, which meet quarterly. Additionally, executive leaders have targeted diversity and inclusion action plans. Charter's CEO and several executives meet annually with the EDIC, which is composed of national civil rights leaders, diversity and inclusion thought leaders, and business leaders who help us understand the needs of the diverse communities we serve. Equally important, Charter's Board reviews our progress annually.

We approach diversity and inclusion holistically to support our commercial strategy and continued business success. Our diversity and inclusion strategy is built around five pillars – our people, a culture of inclusion, products and services, suppliers, and our community.

Our people

Our leaders and employees understand that a workforce that is reflective of the customers and communities we serve helps drive strong business performance. Our workforce of more than 93,000 employees reflects the full range of diversity and abilities, and we actively promote diversity at every level of our organization through a strong focus on the recruitment, retention, and development of our employees. For example, we have partnerships with a number of Historically Black Colleges and Universities ("HBCU") that help us attract diverse early-career talent. Additionally, through our Spectrum Scholars program, Charter awards underrepresented rising juniors in college with $20,000 scholarships along with a structured professional development and mentoring program. In the program's second year, Charter doubled its financial investment in Spectrum Scholars for a $400,000 annual commitment. Scholars have the opportunity to join Charter as interns between their junior and senior years of college. These opportunities can lead to full-time employment, enabling us to further create a diverse entry-level talent pipeline. Our diverse employee base benefits from our internal training and development programs. We also maintain strong partnerships with diverse professional organizations such as The WICT Network and the National Association of Multiethnicity in Communications, and send a number of our employees to their development programs and events.

Culture of inclusion

We are proud of the progress made in promoting diversity in our workforce and are committed to maintaining our focus, as we also recognize that workforce diversity alone is not sufficient to achieve our Company's objectives. We are equally committed to fostering an inclusive environment. We have practices devoted to diversity and inclusion, accessibility, and a fair and respectful workplace, supported by our Equal Employment Opportunity, Diversity & Inclusion, and Accessibility policies. Charter provides equal employment opportunities to all persons and requires all of its Officers, Directors, and other employees to adhere to laws, regulations, and corporate policies relating to equal opportunity and non-discrimination.

Charter further demonstrates our commitment to an inclusive environment through our five Business Resource Groups ("BRG"), which focus on people with disabilities, the LGBTQ community, employees with multicultural backgrounds, veterans, and women. These voluntary groups are open to all employees, regardless of background; connect employees with shared characteristics, life experiences, and interests; and enable them to

In 2021, Forbes recognized Charter's dedication to supporting military veterans by naming the Company to its "Best Employers for Veterans" list. Within the same year, Charter was added to Latino Leaders Magazine's list of "Best Companies for Latinos to Work," which is based on criteria such as employee diversity, employee resource group programs, and efforts to recruit, promote, and retain Latino employees.

Charter's employees reflect the diversity of the communities we serve

49%	Diverse representation by race and ethnicity[10]
21%	Black/African American
18%	Hispanic/Latino
5%	Asian
33%	Female
9%	Veterans

Includes full-time and part-time employees as of December 31, 2021.

engage in activities that advance our culture of inclusion and contribute to business success. Our BRGs not only cultivate a shared understanding and appreciation of colleagues within the Company, but also empower employees to grow and succeed by providing networking, mentorship, and skill-building opportunities. An example of BRGs providing unique perspectives that contribute to business success includes how they have advised our content curation team on content that would resonate with diverse audiences centered on cultural heritage and identity.

In 2021, Charter continued our Charter Inclusion Talks program, an internal speaker series built around cultural heritage, identity, and belonging. Charter Inclusion Talks, which are held across our footprint, raise awareness of the many identities and heritages representing the employees in our Company, and promote inclusive behaviors in the workplace. These programs are supported by a robust communications plan designed to keep our employees informed about how diversity and inclusion support our business.

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[10] Total diverse representation includes all race and ethnicity categories (including Native Hawaiian/Pacific Islander, Native American/Alaska Native, and two or more races in addition to the categories listed).

Products and services

Charter is committed to delivering products and services that meet the unique and diverse needs of customers of all backgrounds and abilities. We have agreements with more than 200 ethnically-targeted and/or minority-owned networks, and we offer video programming packages that are uniquely tailored to appeal to multi-cultural communities, including the African American, Hispanic, Asian-American, Italian, French, Greek, and German communities. Our robust Hispanic-targeted offerings feature more than 75 Spanish-language networks, including a variety of U.S.-originated and minority-owned networks. We continue to evaluate our offerings and seek ways to expand and strengthen our commitment to providing a multitude of diverse programming choices.

Our Accessibility team is embedded within our Product and Technology organization and is focused on enabling our customers to have equal access to our products and services. Since 2018, we have launched four universally-designed apps, such as the Spectrum Access application, which provides audio description and closed captioning for entertainment offerings, and the Spectrum News application, an all-in-one destination for local news, weather forecasts, and events. We also formed a disability support team, located in El Paso, Texas, which is trained to support our residential TV and Internet customers. See further discussion in the Accessible products and services section of the report.

Supplier diversity

Charter believes that supplier diversity enhances innovation, as we view our suppliers as true partners enabling us to deliver greater value to our customers. Across our Company, we strive to increase opportunities to engage suppliers with diverse backgrounds, experiences, and competencies, recognizing that they can connect us to new business networks and ideas, support business growth, and enhance the quality, reach, and accessibility of our products and services. Charter works with a number of diverse suppliers and has exceeded $1 billion in diverse spending in each of the four consecutive years

ending 2021.[11] Our commitment to supplier diversity is extended to all levels of the supply chain through our Tier II reporting program, which encourages Charter's direct suppliers to also utilize diverse-owned businesses for their needs.

Community

Finally, serving our customers and supporting our employees also means investing in the communities they call home. We seek to empower and advance local communities by promoting economic opportunity and access to information to enhance lives in lasting ways. We achieve this objective through partnerships with national civil rights and nonprofit organizations, enabling us to fund and create new programs and initiatives that raise awareness about important issues impacting communities throughout our footprint. As examples, we are partnering with the League of United Latin American Citizens ("LULAC") on Latina LEADS, a program that aims to inspire careers in STEAM fields for Latina middle school girls, and the National Organization on Disability ("NOD") on Look Closer, a public awareness campaign encouraging employers searching for new talent to consider individuals with disabilities and the value they bring to the workplace.

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[11] Charter recognizes suppliers as diverse when they are certified by third-party agencies as businesses that are 51% owned, operated, and controlled by diverse individuals. Diversity groups include: Minority, Women, Veteran and Service-Disabled Veteran, LGBTQ, and People with Disabilities. Charter's approved third-party agencies include: the National Minority Supplier Development National Council, the Women's Business Enterprise National Council, the National Gay & Lesbian Chamber of Commerce, the National Veteran Business Development Council, the U.S. Pan Asian American Chamber of Commerce, WEConnect International, Disability:IN, and Supplier Clearinghouse.

Focusing on a safe and healthy workplace

We value our employees and are committed to providing a safe and healthy workplace. All employees are required to comply with Company safety rules and expectations, and are expected to actively contribute to making our Company a safer place to work. Charter strives for continuous improvement through an integrated environmental, health, and safety ("EHS") management system that provides guidance, instruction, and best management practices that meet or exceed regulatory requirements. As a result, all employees must comply with Company safety rules and expectations, and are expected to identify, report, and correct unsafe conditions or acts that may arise during the work day.

We have an established process to investigate health and safety-related incidents, uncover root causes, and create preventive action plans. When incidents do occur, Charter reports, investigates, and documents the event in accordance with applicable federal and state regulations. Any injury that meets the Occupational Safety and Health Administration ("OSHA") criteria will be recorded and maintained to meet regulatory requirements and Company policy. To reflect the Company's safety performance year-over-year, we tabulate and calculate any incidents into a total recordable incident rate ("TRIR")[12] in accordance with OSHA's methodology. In 2021, our TRIR was 2.2.

The results of our efforts are reflected in the downward trend of our TRIR. In 2021, our OSHA injury rate dropped approximately 8% compared to 2020. This trend is largely driven by initiatives such as:

- Management and employee focus on incident prevention

- Implementation of standardized best practices for jobs and tasks

- Standard equipment upgrades (e.g., lighter equipment with more safety features)

- Continuous improvement efforts for job/task training and onboarding as well as fleet management (e.g., improved standard safety features on vehicles)

- Improvement in safety data processing to create actionable prevention plans (e.g., incident intake and data analysis)

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[12]　TRIR includes full-time and part-time employees as well as temporary workers. Recordable incidents include any work-related injury and illness that result in loss of consciousness, days away from work, restricted work activity, transfer to another job, death, or medical treatment beyond first aid, as defined by OSHA regulations.

Superior Network

We have heavily invested in our infrastructure and technology to build a superior, resilient network that will better serve our customers across our 41-state footprint. Our innovative fixed and mobile technologies are positioned to deliver an excellent connectivity experience for our customers.

Continuously upgrading the resilience and reliability of our network

Investing in our network

Over the past five years, Charter has invested over $40 billion in infrastructure and technology. This includes investments in our fiber backbone, as well as customer-facing projects such as the conversion to all-digital, which freed up capacity in our hybrid-fiber-coaxial network. These investments ensure that we can help meet our customers' needs for reliable, high-speed Internet with enough capacity to support even the most high-bandwidth activities.

In 2021, Charter doubled the starting download speed of Spectrum Internet® from 100 to 200 megabits per second ("Mbps"), expanding the faster speed to nearly six million homes in 17 additional markets. Upon completion, starting speeds of 200 Mbps were available to nearly 85% of the Company's 41-state service area.

In 2021, we invested **$7.6 billion** in our infrastructure and technology.[13]

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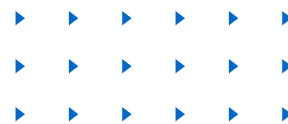
[13] Total capital expenditures are reported as of December 31, 2021, and include customer premise equipment ("CPE"), scalable infrastructure, line extensions, upgrades and rebuilds to our fiber/coaxial cable networks, and support capital associated with the replacement or enhancement of non-network assets. For more details, please see our Capital Expenditures discussion under Item 7 of our Form 10-K for the year ended December 31, 2021.

Managing risk, reliability, and resilience

Charter has taken several key steps to ensure the resilience and continued operations of our critical customer supporting platforms and operational support systems. We continuously monitor and plan for threats that can include high network demand, natural disasters, and cyber-related events.

Enterprise risk management

Charter's ERM process follows five steps: identification, evaluation, classification, confirmation, and ongoing monitoring. To identify risks with potential impact to our strategic plans and business objectives, each of our business units identifies relevant risks and shares the findings with management. Each risk is then classified as high, medium, or low across three categories: impact, likelihood of occurrence, and controls effectiveness. Based on this evaluation, risks are classified into tiers to prioritize and isolate the most pertinent risks for the Company. In the confirmation phase of the ERM process, we confirm risk identification and classification with relevant executives and the Audit Committee, and we share and discuss our risk assessment results with the Board on a regular basis. We then monitor and update our risk assessments as needed, depending on changes to our business environment or other factors. For example, we continue to monitor and manage customer privacy and the cybersecurity of our network (see Cybersecurity and privacy at Charter).

In 2021, as an extension of our ERM process, Charter conducted a climate risk and opportunity assessment informed by the Task Force on Climate-related Financial Disclosures ("TCFD") recommendations. This assessment evaluated substantive financial or strategic impact, defined as a risk that has both a high likelihood and a high severity rating, related to climate change. Though the climate risk and opportunity assessment did not determine climate-related risks and opportunities that currently pose a substantive impact, we continue to evaluate these trends within the context of our carbon emissions goal (see Investing in the efficiency of the network to provide affordable services) and our network resilience activities outlined within the sections below. For more information about our climate risk and opportunity assessment process, see our TCFD Index and our CDP Climate Change Survey Response available on our ESG website.
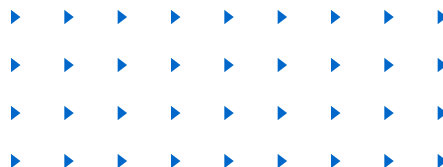
Business continuity management and disaster recovery

Business continuity risks are multifaceted in nature, including the impact of weather events, which we frequently analyze through our incident assessment process. Charter has sound and robust business continuity management and disaster recovery governance processes in place, with a framework that includes:

- Business engagement

- Technical resilience, recovery plans, and coordination of recovery efforts

- Execution of ongoing exercises and training

We leverage a continual service improvement approach to assess risk to our network. As natural disasters and extreme weather events are unpredictable and can be fast moving, we review, practice, and update our Disaster Emergency Action Plan so that we are ready to respond. We conduct regular preventative maintenance and testing to our fixed-facility critical infrastructure that provides services to our customers. The Company reviews facilities at risk from climate events and takes proactive measures to minimize risk, including moving facilities in flood-prone areas and using heat-resistant building materials in warmer climates.

To ensure the resilience and performance of our network, we also conduct regular exercises and testing of our environments. Our Operations Centers monitor our systems around the clock using a multitude of state-of-the-art monitoring tools to maintain uninterrupted service. Disaster recovery testing occurs regularly on our internal systems and networks, allowing for a timely recovery of our systems in the event of a disruption. We provide our employees with disaster recovery playbooks and frequent training (e.g., classroom/online learning and tabletop exercises), enabling employees to react to incidents with confidence and in a well-rehearsed manner.

If a natural disaster strikes, Charter works quickly to safely conduct field surveys to identify impacted customers and restore connectivity. An incident assessment, including assessing possible scope and impact to the business, is conducted as part of any decision to activate Charter's Emergency Management Plan.

Enabling continuity through enhanced redundancy

We maintain geographically distinct data centers, which support our critical platforms. Data centers are highly available, redundant, and have carefully-calculated capacity and bandwidth. Multiple regional data centers across our footprint help distribute our services closer to our customers and enhance our ability to spread or alleviate excess network load as needed. All of our data centers are operated at exacting standards for resiliency and redundancy, such as being equipped with redundant power, backup power supply, and robust onsite data backup platforms that provide rapid recovery options. We also can balance network loads across the data centers, which provides additional flexibility to operate critical applications between data centers in the case of any failures.

Our national network consists of a series of national, regional, metro, and hub level interconnections. Each of these layers are designed with redundancy and resiliency measures. Our network routers are connected to each other through multiple diverse layers and there is additional redundancy in these connections. As such, there are multiple paths through which we can deliver our reliable services and also prepare for outages or maintenance periods.

Network planning and capacity management

Our teams closely track bandwidth demands, including peak periods, and use forecasting tools to inform our capacity management and network planning efforts. We model growth rates of both subscribers and usage per subscriber over time, and constantly monitor network traffic patterns, usage rates, and utilization of last mile access layer networks. These analyses are continuously assessed in relation to previous days, weeks, and years of network activity so we can identify trends and prepare for needed upgrades, as well as future events. These planning efforts directly influence how we invest in new equipment to meet increasing capacity demand. By installing new equipment with existing technologies and also introducing new, distributed, and efficient technologies, we have been able to enhance the way we bring reliable bandwidth to our customers.
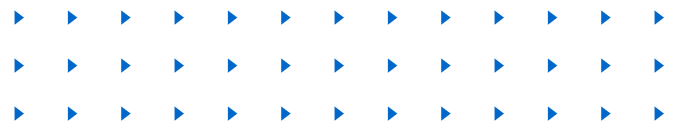
Investing in the efficiency of the network to provide affordable services

Charter recognizes that delivering best-in-class Internet, TV, mobile, and voice services requires the consumption of energy to power our network and fuel to operate our fleet. Accordingly, our business success is predicated on resource efficiency and the mitigation of potential climate change-related impacts. Our climate-related goal to be carbon neutral in our operations by 2035 delivers on our operational efficiency objective and our responsibility to the communities we serve. By driving efficiencies in our network and operations, we are helping mitigate against potential future impacts as well as keeping our customers connected and our services affordable.

Our goal to be carbon neutral relates to our scope 1 and 2 GHG emissions, while scope 3 emissions from set-top boxes ("STBs") and small network equipment ("SNE") are the focus of our efforts under the Energy Efficiency Voluntary Agreements (please see Value chain emissions reduction initiatives).

Our product offerings continue to promote the transition to a low-carbon economy by providing connectivity across our footprint and virtualizing our customers' businesses and everyday lives. As we design the modems, routers, set-top boxes, and other equipment used in our customers' homes and businesses, we consider the end-to-end environmental footprint. Our initiatives outlined later in this section reduce energy consumption, increase efficient use and reuse of materials, and responsibly recycle our products at end-of-life.

Our goal is to achieve carbon neutrality in our operations by 2035.

Charter
COMMUNICATIONS

Carbon neutral by 2035

Charter's strategy for becoming carbon neutral by 2035 focuses on electric energy efficiency, renewable energy, and fleet fuel efficiency. Together, these strategies comprise nearly all of our scope 1 and 2 operational emissions sources.

Our energy efficiency program focuses on reducing GHG emissions within our scope 2 electricity consumption. This demand-side energy management program seeks to identify the greatest opportunities for energy efficiency and cost savings across our property portfolio. Using a data-driven approach focused on energy use intensity, we normalize energy consumption by specific type of site use and geography in order to develop projects targeting our less efficient properties. We are focused on reducing the carbon intensity of our core operations such as customer service. We continue to expand our self-service capabilities and work on improving the quality and efficiency of our interactions with customers, allowing us to reduce transactions with customers, lower churn, and reduce costs. From 2016 to 2021, even as we grew our customer relationships by 22%, launched mobile services, and insourced and returned call center jobs to the U.S., the efficiency of number of customer relationships per call center increased 118%.

Given the nature of our operations and the continued growth of our business, our renewable energy strategy recognizes that we will need to decarbonize the electricity we consume as we keep our customers connected. Going forward, we will account for standard delivery

renewable energy, as well as acquire renewable energy certificates ("RECs") via renewable power purchase agreements, utility green energy programs, and/or direct purchase. We are evaluating and optimizing renewable energy opportunities to pilot where they will have the most impact. Our renewable energy strategy takes into account the geographic concentration of electricity consumption to support our operations, the availability of renewable energy within the regional electricity grid, as well as local and state renewable initiatives such as Renewable Portfolio Standards.

Our technicians perform a critical function to keep our customers connected and to service our network via our fleet. We continue to focus on fleet and fuel efficiency initiatives as fleet comprises approximately 23% of our scope 1 and 2 emissions.

Charter has been conducting a study as to the feasibility of some portion of our fleet being electric vehicles. Our study will continue to take into account a myriad of factors including (i) the distributed nature of our fleet over 41 states, (ii) the required size and weight of a large portion of our vehicles, (iii) the distances our vehicles travel in a day and the varied environments in which our vehicles operate (e.g., colder temperatures limit the range of EVs), (iv) impacts to business continuity during emergencies such as electricity outages, (v) our operating model involving technicians taking their assigned vehicle to their residences at the end of each day and the availability and any reimbursement practices for charging stations at their single or multi-family residences, (vi) the capital investment represented by our current fleet and the associated replacement schedule, and (vii) EV technology availability and limitations for meeting our requirements as to vehicles and charging stations. Notwithstanding these operational and technological challenges, we will continue to further our feasibility study, including monitoring and attempting to influence EV availability, and by the end of 2022, we will have launched a pilot utilizing a number of light duty electric vehicles in one of our market areas. The pilot will help us assess the viability and extent of electrification in our fleet. As we continue our study and this pilot, we anticipate developing a goal for electrification of a portion of our fleet.

Understanding our sources of GHG emissions

Charter accounts for GHG emissions in both our operations and value chain in line with the concepts of "scope" defined in the GHG Protocol.

- ▸ Scope 1: Direct emissions produced from assets Charter owns or controls, namely from fleet, natural gas, corporate-owned aircraft, and fugitive emissions from our fire suppression systems

- ▸ Scope 2: Indirect emissions from electricity and steam purchased by Charter

- ▸ Scope 3: Select other indirect emissions produced upstream and downstream of Charter's operations, namely corporate air travel, material energy, and energy use for various devices – STBs, SNE, and mobile devices that are either owned or controlled by our customers

Since completing our first GHG baseline assessment of our 2019 emissions, we have completed additional years of GHG inventories for 2020 and 2021. This multiyear view provides trending insights, tracks progress, and focuses our efforts to achieve our carbon neutral goal.

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MT CO$_2$e[14]	2021	2020	2019
Fleet	327,462	351,863	379,285
Other Operational Emissions	48,247	45,712	46,875
Scope 1 Total	**375,709**	**397,575**	**426,160**
Electricity[15]	1,057,823	1,076,974	1,191,163
Scope 2 Total	**1,057,823**	**1,076,974**	**1,191,163**
Scope 1 and 2 Total	**1,433,532**	**1,474,549**	**1,617,323**
STB and SNE[16]	926,838	950,000	888,874
Mobile	78,111	62,220	25,848
Corporate Air Travel	2,834	2,450	10,170
Scope 3 Total	**1,007,783**	**1,014,670**	**924,892**

Our scopes 1 and 2 emissions, which are part of our goal to be carbon neutral in our operations, have decreased over 11% since our baseline year of 2019. Charter's scope 1 Fleet emissions continue to decrease approximately 7% annually due in part to initiatives to reduce truck rolls, as well as increased vehicle fuel efficiencies. Our scope 2 emissions have been decreasing each year – 11% since 2019 and 2% since 2020 – in part because of our application of updated U.S. EPA eGRID emissions factors each year, which improve with increasing availability of clean, renewable energy on the grid. Additionally, our underlying electricity consumption decreased approximately 2% since our baseline reporting year of 2019 in part due to lower electricity use in our operations during the COVID-19 pandemic. We expect electricity consumption for the coming years to increase relative to the 2019 baseline with the growth in our business including enhancements to our network like the buildout of markets related to the Citizens Broadband Radio Service ("CBRS") spectrum auction and expansion from the rural construction initiative.

Our overall scope 3 value chain emissions increased 9% since our baseline year of 2019 due to the increased customer demand for Internet services and the growth of our Spectrum Mobile business. When accounting for the SNE and STB emissions, the energy efficiency reductions with the Voluntary Agreements and fewer purchases of STBs by Charter are offset by a consistent increase in total volume of purchased modems and routers. Energy use emissions from both STB and SNE experience the same proportional and passive emissions reductions associated with the greening of the grid as our scope 2 electricity emissions.

[14] Metric tons of carbon dioxide equivalent ("MT CO$_2$e"), representing the number of metric tons of carbon dioxide emissions with the same global warming potential as one metric ton of another GHG. GHG accounted for across the inventory include: carbon dioxide ("CO$_2$"), methane ("CH$_4$"), nitrous oxide ("N$_2$O"), and hydrofluorocarbons ("HFCs"). Scope 1 Other Operational Emissions includes 0.45 metric tons of CO$_2$e from fluorinated ketones. Charter calculates GHG emissions using carbon dioxide equivalents or "CO$_2$e" methodology from reputable sources, including the U.S. EPA Emissions Factor Hub and U.S. EPA Emissions & Generation Resource Integrated Database ("eGRID").

[15] Scope 2 electricity includes a small amount of steam, 735 in 2020 and 741 in 2021.

[16] Includes energy use and material energy from STBs and SNE purchased within the corresponding year, consistent with what we report in the Energy Efficiency Voluntary Agreements. Annual calculations do not include energy use or material energy from legacy STBs and SNE previously purchased.

Climate governance

The Climate Data Committee and the Climate Initiatives Committee operate as subcommittees of the ESG OSC, and are composed of cross-functional leaders spanning multiple business divisions. The Climate Data Committee is responsible for GHG data collection and calculation aligned with leading practice. The Climate Initiatives Committee is responsible for the quantification of emissions avoided from our emissions efficiency and reductions projects. In 2021, Charter appointed a Sustainability Director within Corporate Services to lead the Climate Committees, oversee GHG management and reporting, and coordinate with business divisions to develop strategies required to achieve Charter's goal to be carbon neutral in our operations by 2035. As the executive overseeing sustainability, the Senior Vice President, Corporate Services provides regular updates to the ESC on climate strategy and progress.

Operational emissions reduction initiatives

Buildings

Later this year, Charter will complete construction of tower two of our new Stamford, Connecticut headquarters campus. As with our tower one build, we followed the LEED Silver® principles for design, LED lighting, as well as other sustainability and wellness property operating practices. When feasible, we find opportunities to apply LEED principles to new builds, retrofits, and lifecycle reinvestment projects. In all our property refreshes, the LEED principles that we employ include LED lighting upgrades, energy-efficient mechanical designs, and the reuse of furniture and other building assets from decommissioned properties.

We continue to identify properties with oversized or redundant power and mechanical systems related to former uses, and we are pursuing decommissioning these systems to right-size for current use. For example, a building on our Charlotte campus formerly designed for data center use now saves approximately 2,300 metric tons of CO_2e per year. Charter accomplished this by removing oversized generators, storage tanks, and non-essential backup power modules, and subsequently reconfiguring electrical and mechanical systems. These efforts improve the carbon emissions profile of our property portfolio by removing unnecessary design and operating conditions.

Data centers

Our five National Data Centers ("NDC") were designed and built to provide 100% service continuity while operating at the highest levels of energy efficiency, exemplified by LEED certification achieved for the buildings that house the Denver (LEED Gold®) and Charlotte (LEED Silver®) data centers. Our data centers expand at the pace of the Company's growth and success to keep our employees and customers connected. NDCs were designed with energy-efficient mechanical, electrical, and cooling systems to optimize performance and energy efficiency, and use the industry standard Power Usage Effectiveness ("PUE") metric to measure overall efficiency.

Efficiency strategies in the NDCs include, but are not limited to:

- Air flow management that increases cooling efficiency by optimizing airflow in data halls with the use of aisle containment, blanking panels, and perforated tiles.

- High-efficiency cooling systems that use outside air without the need for "chiller" equipment when weather conditions are favorable, and high-efficiency chillers when outside temperatures are higher. In 2021, evaporative free-cooling avoided over 5,700 megawatt-hours ("MWh") of electricity usage.

- Dedicated personnel to help research, identify, and evaluate opportunities, including tracking energy efficiency at the NDCs.

- Regular third-party efficiency "health checks" by industry experts that help keep efforts aligned to our long-term strategy and goals. These "health checks" enabled LEED certifications in Denver and Charlotte, and facilitated consultations on potential new initiatives and suppliers.

- Other energy-efficient equipment, including variable frequency drives on pumps, LED lighting, efficient uninterrupted power supplies, and equipment racks.

- Increasing the use of virtual machines, optimizing the utilization of servers, and refreshing hardware with more efficient models, as well as migrating and consolidating IT load and equipment from least- to most-efficient data centers.

Renewable energy

Charter has eight locations that generated approximately 9,300 MWh of renewable energy from solar arrays in 2021 that help decarbonize the electricity grid and are consumed by others. We estimate that energy from these arrays reduced overall grid emissions by approximately 2,500 metric tons of CO_2e in 2021. One solar array is an approximately 800 kilowatt system on the roof and grounds of our core operations at the Charlotte NDC. This data center has generated over 7,400 MWh of electricity and helped decrease overall grid emissions by approximately 5,300 metric tons of CO_2e since installation in 2015. In addition, the Charter Corporate Finance and Tax Operations teams are committed to providing capital for renewable energy projects, with expected positive returns. In 2021, Charter provided tax equity investments for four solar projects that together will generate at least 30,000 MWh of clean energy to the grid each year.
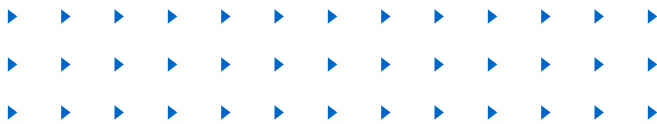
Fleet

Charter systematically replaces older vehicles to increase the efficiency of our fleet and leverage new technology. For example, we installed telematics devices in vehicles to optimize routing. Our overall truck roll count decreased in 2021, compared to 2019 and 2020, as a result of self-installations, lower customer churn, and operational efficiencies, all while maintaining the proportion of truck rolls supported by in-house technicians. The increase in customer self-installations is a result of our all-digital initiative completed in 2018, as well as customer preferences. Altogether, the fuel avoided from 2021 fleet efficiency efforts equated to approximately 10,800 metric tons of CO_2e. As we expand our business into rural areas (please see Rural construction initiative), we will continue to monitor implications on our fleet emissions, average distance traveled, and truck rolls.

Value chain emissions reduction initiatives

Charter's commitment to sustainability extends beyond our data centers and networks to improving the energy efficiency of the Internet modems and video STBs used in customers' homes to access our services. Charter is a founding signatory of two historic initiatives that have improved the energy efficiency of these devices, saving customers billions of dollars in electricity and avoiding millions of metric tons of CO_2e. These measurements are verified through annual independent evaluation and audits performed by D+R International and through third-party lab verification testing.

STB energy efficiency

Under the Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of Set-Top Boxes ("STB Voluntary Agreement"), announced in 2013 in partnership with the Natural Resources Defense Council and the American Council for an Energy-Efficient Economy ("ACEEE"), video service providers representing nearly 95% of the U.S. market committed that at least 90% of their new STBs purchased each year would meet prescribed efficiency levels. These levels were made even more rigorous in 2017 and 2020, and even more efficient targets are set to take effect in 2023.

According to D+R International's most recent Annual Report, the parties to this agreement have succeeded in:

- Reducing the national energy footprint of STBs by more than half (from 32 terawatt-hours ("TWh") in 2012 down to 15.2 TWh in 2020), a savings nearly equivalent to the power generated by six typical 500 megawatt coal-run power plants

- Saving customers $2.2 billion on their electricity bills in 2020 alone

- Avoiding nearly 12 million metric tons of CO_2e emissions annually

The STB Voluntary Agreement decreased average energy consumption, achieving a 46% drop in average energy consumption since 2012 by digital video recorders, the most energy-intensive type of STB.

SNE energy efficiency

Under the Voluntary Agreement for Ongoing Improvement to the Energy Efficiency of Small Network Equipment ("SNE Voluntary Agreement"), signed in 2015, all of the nation's large Internet service providers teamed with numerous leading device manufacturers to improve the energy efficiency of modems, routers, and network extenders used by customers to access the Internet. Like the STB Voluntary Agreement, signatories committed that at least 90% of their new devices would meet prescribed efficiency levels that have increased in rigor over time.

The success of the SNE Voluntary Agreement is measured differently due to the extraordinary, rapid change in the customer demand for faster speed to their home and stronger WiFi within it. From 2017 to 2020, Charter's flagship service speed tripled from 60 Mbps to 200 Mbps and our customers' average monthly data consumption rose from 200 Gigabytes to 600 Gigabytes. To keep pace, the device features have changed significantly, and the SNE Voluntary Agreement's "new features" process has afforded companies the flexibility to innovate rapidly while quickly establishing efficiency metrics for these features. Under this framework, Charter's SNE energy use relative to average broadband download speed, or "emissions intensity", decreased by approximately 66% between 2017 and 2020. Charter provided improved energy efficiency while also delivering more robust services customers need to work, learn, and stay connected.

Charter's website contains more information about these initiatives, including links to the energy consumption of all new models deployed by Charter under the STB and SNE Voluntary Agreements.

Design for Reuse

Design for Reuse is a program within Charter aimed at utilizing the industrial design process to extend the longevity of useful product life, which will then reduce indirect carbon emissions. This program enables Charter to innovate ways to reduce and reuse materials, while analyzing the impact of the program across different lines of business. There are two major initiatives that the program is currently implementing and investigating. First, the program focuses on the refurbishment of customer premises equipment and the reuse of materials. The second initiative analyzes self-installation kits

and identifies opportunities to reduce both materials used and emissions produced. Given that the core aspects of the program require manufacturing, implementation, and distribution of equipment, collecting raw data for analysis from the program's implementation requires a multiyear effort.

The equipment refurbishment aspect of this program will be implemented on all Charter designed equipment moving forward: it has been implemented with our WiFi 6 router and is being applied in a new product currently under development. The life cycle of these products is cyclical, so conducting refurbishment on a piece of equipment can reduce emissions by reusing existing customer premises equipment. This process involves receiving damaged equipment, replacing the exterior housing, and then redeploying the equipment. The estimated emissions reduction for the WiFi 6 router will be over 4,000 metric tons of CO_2e per 100,000 units refurbished.

The materials reduction initiative focuses on self-installation kits. This process involves reviewing current materials used, methods of manufacturing, and location of manufacturing. There are potential opportunities to reduce the amount of materials used per kit and manufacture domestically to reduce emissions created during shipping.
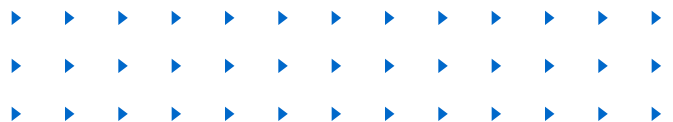
Mobile

We have programs that help mitigate customers' need for new mobile devices, which will, in turn, reduce Charter's carbon footprint. One of the leading Spectrum Mobile™ service product offerings is the "Bring Your Own Device" ("BYOD") program where customers bring devices they already own to our network. Spectrum Mobile™ also provides a great trade-in offer plus an extra $100 promotional credit towards a new device for customers who trade-in a previously owned device. These trade-in devices are then sold to third parties for reuse and recycling. Both of these programs help Charter avoid additional carbon emissions produced from device manufacturing.

Reducing waste and recycling

Charter is committed to protecting our environment by adhering to environmental laws and regulations as well as Company standards and guidelines. To achieve that objective and implement best practices, the Company has comprehensive material reuse and recycling take-back programs, where we internally reuse collected

materials within Charter's operations, if possible. Materials that we can no longer use within the Company are disposed through resale programs as appropriate, where other companies can purchase and reuse the materials for their originally intended purposes. Materials that can no longer be reused for their originally intended purposes are recycled by companies certified to the R2 and/or e-Steward standards. In 2021, we recovered 29,046 metric tons of materials through take-back programs consisting of the following: CPE, CPE remote controls, power supplies, IT equipment, network equipment, and mobile devices. Within the core operations of our NDCs, our efforts recycled, sold, or re-marketed over 11,000 hardware pieces, including server, network, storage, and other equipment.

Connected Communities

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The capabilities of our network combined with the generosity and hard work of our workforce are key levers in Charter's ability to help uplift our communities – whether through our programs to bridge the digital divide, repairing homes and community centers in the communities where we live and work, reporting on local news, expanding access to our products and services, or advancing customer protection online.

Investing in the communities we serve

Charter invests in communities where our customers and employees live and work, helping communities become more connected, stronger, and better prepared for the future. We are committed to impacting lives based on community improvement goals that are realized through the provision of high-quality and affordable services, programs focused on strategic philanthropic investments, in-kind support, and employee engagement. Our philanthropic efforts include programs that promote digital inclusion through digital education grants and other technology resources for local nonprofits, enhance small businesses through low-cost loans and technical assistance grants, and address critical human needs, such as housing, food, and job training, with investments in nonprofit organizations in rural and urban communities.

Spectrum Community Assist

In the fall of 2020, Charter completed its signature philanthropic program, Spectrum Housing Assist, and met our goal of improving 50,000 homes across the country. Building on the success of Spectrum Housing Assist, in 2021, Charter launched Spectrum Community Assist ("SCA"), a $30 million, five-year philanthropic initiative aimed at revitalizing community centers in rural and urban areas and investing in job training programs in underserved communities across the Company's 41-state footprint. Charter's goal is to improve 100 community centers in both urban and rural communities across the country, impacting an estimated 50,000 local residents over the next five years.

Through SCA, Charter partners with national and local nonprofit organizations to identify and improve community centers in need of support. The Company invests in the centers' job training efforts with cash grants and in-kind contributions, improving physical classroom spaces and providing technology to enhance participants' learning experience, including laptops and classroom furniture. Revitalization events with employee and community volunteers are held at each center. Additionally, because broadband is a critical component of a community center's infrastructure, Charter is providing each community center with its advanced 1 gigabit per second ("Gbps") Internet service.

Charter launched SCA in St. Louis at Better Family Life ("BFL"), a nonprofit organization focused on stabilizing inner city neighborhoods, which utilizes our program to expand its career development services for residents. In addition to financial assistance, Charter's upgrades to the facility, including the new Spectrum Technology and Training Center, enabled BFL to offer additional classes to further serve the community. Charter subsequently launched four additional SCA partnerships in Charlotte, Glen Falls, Orlando, and Stamford.

Spectrum Community Investment Loan Fund

The Spectrum Community Investment Loan Fund ("Loan Fund"), with over $22 million in committed loan capital, capacity grant donations, and in-kind contributions, invests in businesses in economically-underserved communities. By offering loans directly to local businesses or through Community Development Financial Institutions ("CDFIs"), the Loan Fund provides growth capital, creating new jobs and strengthening the economic infrastructure in both rural and urban areas. Through partnerships with organizations like the National Urban League, National Action Network, and the National Asian American Coalition, the Loan Fund directly invests in the communities where Charter's employees and customers live and work, and issues grants to provide technical assistance and small business education to local business owners. The Loan Fund has made commitments to CDFIs in 14 states, covering nearly 85% of the Company's footprint.

Spectrum Digital Education

Charter funds programs offering broadband education, training, and technology through Spectrum Digital Education. The nonprofit organizations that receive grants through this program align with the Company's desire to educate community members on the benefits of broadband and how to use it to improve their lives. In 2021, Charter awarded $1 million in grants to 49 nonprofits, increasing the program's total investment to $7 million in grants, plus in-kind donations – all in support of broadband education across the Company's footprint – since the program launched in 2017.

A nonprofit grantee in Cleveland, Ashbury Community Services, Inc. ("ACS3"), has leveraged its awards to provide access to devices, connectivity, and specialized digital literacy training for older adults. The educational programs have enabled this organization to help seniors enhance their technology skills using digital devices and tools, improving their quality of life.

Spectrum Employee Community Grants

Spectrum Employee Community Grants assist nonprofit organizations where our employees volunteer that provide critical services, such as food pantries, homeless shelters, and job placement programs. Employees who have volunteered with the nonprofit for at least one year nominate organizations to receive funding, enabling them to further their missions in local communities. For example, an employee in Honolulu nominated the Hawaii Foodbank for a grant and the organization received a $10,000 contribution to support their programs addressing the continued food insecurity caused by COVID-19. Since July 2019, Charter has distributed 395 Spectrum Employee Community Grants totaling $1.1 million including in-kind contributions.
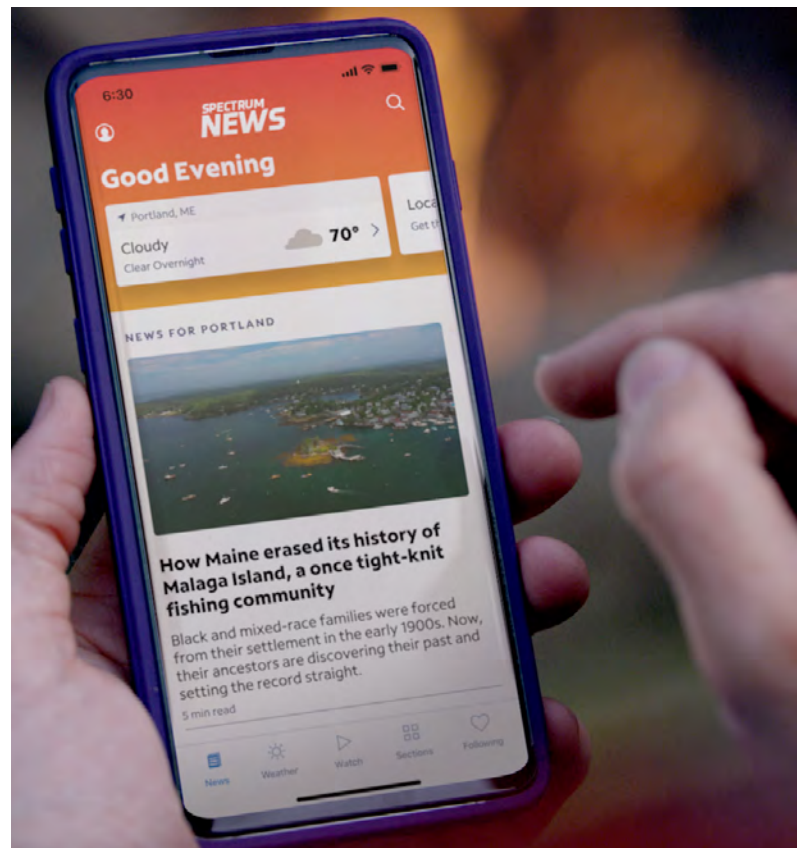
Spectrum News

Spectrum Networks operates 34 news networks across 12 states. Spectrum News is an important part of Charter's commitment to the communities we serve. With journalists embedded in local communities, Spectrum News provides original hyperlocal stories, news, and weather reports, along with issues-based and objective public affairs programming relevant to viewers. We also provide the Spectrum News application where customers can read, watch, and listen to news stories by our Spectrum News journalists and local partner publications on their mobile devices.

Spectrum News ranked as the number one source of news for Spectrum customers in December 2021, averaging more than 2.6 million daily-viewing households across its linear and digital platforms.

Spectrum News is committed to providing fact-based and unbiased content, particularly on sensitive, human rights, and democracy issues. Examples of this commitment include:

- We continued our award-winning work in covering all levels of government and dedicated resources and programming time for coverage of local governments, policymakers, and issues, including expanding our Washington D.C. Bureau.

- We launched an anti-bias program that includes engaging with an outside media monitoring company to assess various forms of bias in our content, including unconscious bias. We also partnered with several local, nonpartisan, and nonprofit content producers to provide additional perspectives in our coverage as part of multi-stakeholder initiatives.

- Through sponsorship and promotion, Spectrum News supports the efforts of nonprofit organizations, such as Report for America, to promote media literacy and restore news coverage in so-called "news deserts."

Our commitments are further reinforced by the Group Vice President ("GVP") of Spectrum Networks News Standards and Practices who oversees and is responsible for news principles and journalistic standards as defined in our Spectrum Networks News Standards and Practices Policy. Vice Presidents of Content, News Directors, and Managing Directors monitor local content to ensure compliance with our standards and guidelines. Our News Standards and Practices Policy is reviewed and revised for relevancy on a continuous basis. In addition to acknowledging the review of the policy on an annual basis, all Spectrum Networks employees are required to complete annual training on our standards to help guide our journalists' behavior and editorial independence.

Spectrum Networks is supported by a News Standards Advisory Committee, which was created to help Spectrum Networks answer some of the most difficult questions around journalism ethics, freedom of expression, and social responsibility. We encourage our employees to report any violation of the policy or our standards. The GVP and News Standards Advisory Committee are responsible for ensuring compliance with our standards and review any reported violation. The GVP is responsible for collecting and tracking all reported violations and resolutions in a consistent approach across Spectrum Networks.

Protecting customer data, privacy, and security

Cybersecurity and privacy at Charter

As a connectivity provider, we take the protection of our customers' privacy seriously. We value and rely on their trust and loyalty.

Policies

Charter maintains a series of privacy-related disclosures across all business lines and subsidiaries addressing the personal data of its customers and consumers of its products and services, including a comprehensive, consumer-facing privacy policy that applies to all Charter consumer-facing products, services, websites, and applications, as well as consumer interactions with our call centers, stores, and online tools. Charter maintains additional consumer-facing privacy policies that address certain state-specific legal privacy requirements, such as our California Consumer Privacy Policy, as well as other consumer-facing privacy policies that apply to

certain services or practices, such as the Company's Biometric Data Privacy Notice and Internet DNS Privacy Notice. These privacy policies provide consumers with the information they need to understand Charter's data collection and use practices, and offer consumers the opportunity to exercise meaningful choice with respect to how Charter uses data. For example, as described in our privacy policies, Charter does not use details of our Internet subscribers' Internet use, such as web browsing history, as part of our process of delivering advertising. Charter also does not sell or otherwise share information that personally identifies our customers – including their Internet usage information, video usage information, or call detail information – to third parties for those third parties' own use, such as marketing or advertising

As set forth in the Spectrum Privacy Policy, we commit to:

- Communicating our privacy practices in a manner that is easily accessible and clearly describes consumers' choices.

- Offering consumer choices about how we may use information for our own marketing purposes. Charter notifies consumers of data sharing pursuant to applicable U.S. laws and regulations.

- Not selling Personally Identifiable Information ("PII") to anyone for any purpose – this includes our customers' web browsing history, call detail records, and viewing activity.

- Securing customer information through the use of reasonable security measures.

- Giving customers advance notice of any changes to our privacy commitments and always posting our most current version of the Spectrum Privacy Policy at www.spectrum.com/privacy.

- Implementing leading data protection standards, informed and influenced by standards recommended in the National Institute of Standards and Technology ("NIST") cybersecurity framework, setting access restrictions, and encrypting consumers' PII as a matter of course.

of their own products and services. We have also long called for a strong federal framework to protect consumers' privacy online: to help protect those we service and build confidence that their personal information is safeguarded.

Our Spectrum Privacy Policy, as well as additional information about our overall privacy practices, is available to consumers on our website and can be accessed from any Spectrum-managed webpage a consumer visits. The Spectrum Privacy Policy describes the types of information we collect; how we may collect, use, and share that information; the choices our consumers have regarding such use and sharing, including marketing and advertising preferences; and the consumer privacy rights that may be available under applicable law when they subscribe to or interact with Spectrum services. In an effort to minimize data, Charter retains information only so long as the information is needed to carry out a specific business purpose, unless it is required by law to retain the information for a longer period. The retention period depends on the business purpose for which the information is used, as well as any legal or regulatory requirements that may apply. Charter also complies with its legal and regulatory obligations under applicable state and federal laws, such as the state California Consumer Privacy Act ("CCPA") and the federal Cable Act, that may grant consumers the right to access and delete personal information that the Company has collected about consumers. Although there is no legal right to rectify customer information under applicable U.S. state or federal law, with the exception of a limited right to correct certain information under the federal Cable Act, Charter addresses customer requests to correct information on a case-by-case basis after authenticating the customer and verifying the requested change information. For example, we may rectify certain account information, such as the contact/billing information we have on file about subscribers, and are closely monitoring the evolution of privacy rights at the state and federal levels to ensure not only compliance with the law but also our ability to meet our customers' expectations.

Charter maintains a comprehensive series of internal policies governing access control and protection in place for various types of data classifications, including enhanced requirements for personal or sensitive data (which may include account information, location data,

customer proprietary network information ("CPNI"), payment card industry data, and other types of personal information). For example, Charter maintains heightened access restrictions for customer information, including requiring not only customer authentication, but also internally protecting such data through managed access rights to such data by limiting access to only those personnel with a legitimate business need to know, restricting the use and/or transfer of such data, setting specific requirements for the permissible handling and transmission of such information (e.g., encryption, password-protection), and monitoring for unauthorized access to such information. These precautions include standards and controls based on the information classification of the data, as well as standards for protecting, handling, labeling, duplicating, distributing, storing, transporting, and disposing of data. Charter also extends these internal policy requirements and controls to its vendors and service providers who will have access to or provide services involving consumer or Company information, and also requires such vendors and service providers to acknowledge and adhere to the principles of Charter's privacy policies.

Security and privacy governance

Charter has a Chief Information Security Officer ("CISO"), Cyber Security Council ("CSC"), and Security Executive Steering Committee ("Security ESC") that collectively oversee cybersecurity across the Company. The CISO focuses on cybersecurity and the overall protection of the Charter internal network and related processes, policy, training, and actions to protect customer and employee data. The CSC, which meets bi-weekly and is comprised of the CISO and senior leaders across the organization, operates under the auspices of the Security ESC, which is ultimately accountable under the Company's enterprise risk management program for cybersecurity. The Security ESC, which is comprised of senior leaders across the organization, meets monthly and updates the CEO and COO each quarter to discuss improvements to our program. The Audit Committee of the Board receives updates from management on consumer data privacy issues that may impact the Company, as well as the Company's plans to mitigate privacy and cybersecurity risks, including complying with evolving data privacy laws and regulations.

Program evaluation and audits

We have a comprehensive cybersecurity program to manage cybersecurity risk that leverages the NIST cybersecurity framework to inform, evaluate, and continuously improve our cybersecurity program. Our security policies, procedures, and technologies are influenced by NIST 800-53 for security controls and supplemented with several lines of support. Our teams perform regular threat assessments, vulnerability scans, and targeted penetration testing. Our Internal Audit function executes an annual audit plan that includes regular audits of cybersecurity related processes and internal controls through operational IT control audits, our annual compliance assessment of Payment Card Industry Data Security Standards, and the annual assessment of internal controls over financial reporting. We also regularly work with external consulting firms to conduct independent evaluations of our cybersecurity program.

We also conduct periodic privacy risk assessments at the enterprise level that include review of our individual products and services and how our practices may affect customer data. These privacy risk assessments occur throughout the product life cycle, including when our data collection and use practices may change.

Incident response

In the event of an incident, Charter follows its data breach and incident response plan as well as an incident management process. Charter's incident response plan includes policies that govern executive escalations and notifications involving cyber events and incidents. Our Security Operations Center monitors, detects, and responds to security incidents, in accordance with our incident response plans, that are maintained at the technology and business unit level.

Training

All of our employees receive cybersecurity and data privacy management training on at least an annual basis, and we conduct regular cybersecurity and privacy awareness-raising activities on the latest cybersecurity trends and privacy implications affecting customer data. Some functional departments with increased exposure to sensitive information receive additional and more frequent training, as appropriate. Our agreements with

contractors also generally require them to receive cyber-security and data privacy training, in accordance with our standards and/or applicable laws and regulations, and in some instances, they are also required to certify or acknowledge compliance with training obligations.

Contractors and business partners

The Company requires all contractors, service providers, and business partners with access to personal informa-tion or critical IT environments to review and adhere to our security and privacy policies and related standards of how we treat data, what information we collect from customers, how and under what circumstances such data can be used, and how such data should be treated and handled. Our contractor agreements explicitly require our contractors to abide by specific policy requirements, particularly for third-party data-processing activities. In our due diligence and selection process, we also require contractors to complete a cybersecurity and data privacy questionnaire that includes questions about contractor track record. For existing contractors, we monitor for scope of service changes that impact access to personal information, and if there are such changes, the contractors are required to undergo a reassessment of our full ques-tionnaire and potential additional contracting require-ments around data privacy.

Charter places security-related contractual obligations on our third parties, including, but not limited to, access controls, vulnerability management, secure coding prac-tices, breach notification, and security awareness train-ing. For vendors that offer SAAS solutions that involve PII, we also require third-party attestation of their secu-rity practices such as a SOC2 or ISO27001 certification. Charter's internal policies govern the Company's rules for sharing, disclosing, and making available consumer PII to third parties, whether those third parties are acting as the Company's agent or non-agent. The requirements of these policies are also included in vendor, service pro-vider, and third-party contractual agreements.

Security offerings

Advanced Home WiFi

We have completed our roll out of Advanced Home WiFi, which is now available to 100% of Internet serviceable homes passed. With the mission to optimize home networks, Advanced Home WiFi provides Spectrum Internet® and WiFi customers with detailed visibility and control over connected devices on their home networks through the My Spectrum application.

The network scheduling feature, which provides customers with control over WiFi availability for certain devices and times of day, enables parental control schedules to be set for children's devices. Advanced Home WiFi also enables customers to limit access entirely to unknown devices attempting to get on the network. This offering is built on a software platform that allows us to launch additional network-based security and control features for customers. Advanced Home WiFi also provides remote telemetry for Charter service representatives, enabling a heightened ability to identify and resolve issues, and provides superior customer support while minimizing the need to send technicians to customers' homes.

In 2022, we will begin rolling out Spectrum Security Shield across the residential footprint on the Advanced Home WiFi platform. This network-based security protects all devices in the home from cybersecurity threats across the Internet while safeguarding customers from malicious websites. This will be in combination with Spectrum's free Security Suite, which provides endpoint protection to computers in the home, defending against viruses, spyware, and threats from malicious actors across the Internet.

In 2021, we brought the capabilities of Advanced Home WiFi to multiple dwelling units as Advanced Community WiFi. With Advanced Community WiFi, tenants receive the same visibility and control over their apartment's WiFi networks through the My Spectrum App, while building managers will be able to see and manage the entire building's network through a purpose-built property service portal.

We have achieved our goal to provide better, safer connectivity for our communities by making our Advanced Home WiFi platform available to 100% of Internet serviceable homes passed.

Spectrum Enterprise

We offer enterprise customers multiple network security services to safeguard against Internet threats and protect their network operations. DDoS Protection is a subscription-based service that protects customers' networks against volumetric attacks by automatically identifying and mitigating threats. Managed Security Service strengthens customers' Internet security by providing a fully managed and maintained firewall to protect against threats while securing site-to-site and remote connections.
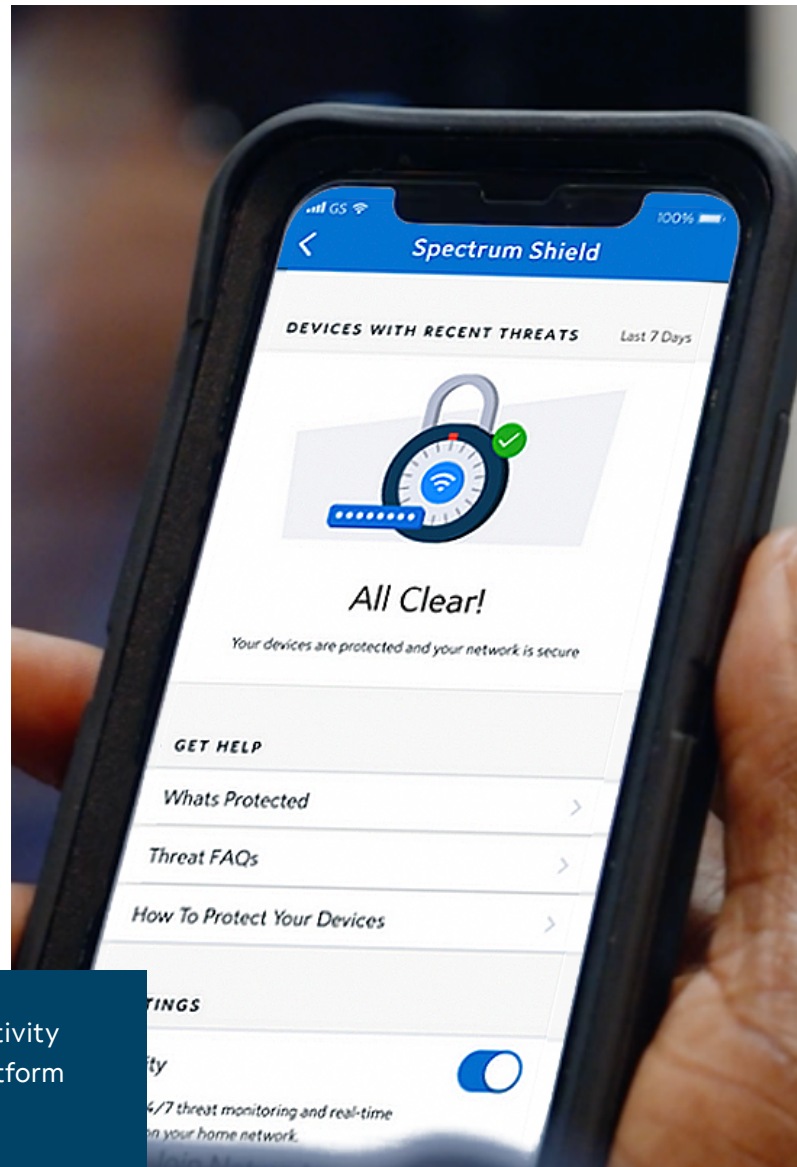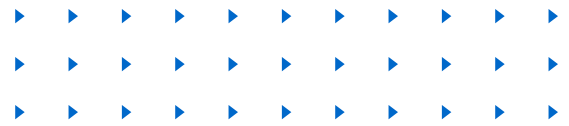
Expanding access to our products and services

Rural construction initiative

Broadband Internet access is more important than ever for education, employment, healthcare, and daily life. Yet, millions of households and businesses – especially among vulnerable communities and in rural areas – still lack access or have not adopted broadband Internet service. High-quality, high-speed Internet access supports new employment opportunities, enables remote education, and expands the innovative aspects of the knowledge and information economy. A recent report from the FCC shows that 14.5 million Americans remain unserved, as they are unable to access high-speed broadband. About 11 million of them live in rural areas.

Charter is committed to connecting more communities, and in 2021, this commitment was recognized as Spectrum Internet® was ranked No. 1 in rural Internet service in the U.S. News & World Report 2021-22 "Best Rural Internet Service Providers" rankings.

In 2021, we announced that we expect to invest over $5 billion over the next six years, a portion of which we expect to offset with government funding, including $1.2 billion of support won in the Rural Digital Opportunity Fund ("RDOF") and other federal, state, and municipal grants that are available, or that we expect to become available, to expand our network and offer reliable broadband services of up to 1 Gbps to one million unserved

> Our goal is to expand our network to provide high-speed broadband access to one million unserved and underserved rural customer locations by investing over $5 billion over the next six years through our rural construction initiative.

and underserved customer locations in states where we currently operate. We will add over 100,000 miles of new network infrastructure to our approximately 800,000 existing miles. We are in the process of hiring more than 2,000 employees and contractors to support our rural expansion. In addition to construction in areas subsidized by various government grants, we expect to continue rural construction in areas near our current plant and surrounding subsidized construction. This initiative provides the communities we serve with reliable connectivity services and provides Charter a long-term growth opportunity, as it will drive additional customer growth through an expanded footprint in unserved and underserved areas.

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Charter
COMMUNICATIONS

Affordability

Expanding broadband access goes beyond geographical reach, as it also means expanding affordability. One of Charter's major tenets is to provide quality services at low rates. We have specialized offerings to enhance affordability for particularly vulnerable populations.

We are making our Internet product more accessible and affordable through Spectrum Internet® Assist, our standalone, low-cost Internet service. Qualified households can receive low-cost, high-speed 30 Mbps service with no data caps and a free modem. Spectrum Internet® Assist is available to eligible low-income families and seniors across our footprint.

In addition, Charter's Remote Education Offer ran through May 2021 and provided two months of free Spectrum Internet to new Spectrum Internet households with K-12th graders, college students, and/or educators. In May 2021, as part of our commitment to help close the digital divide, we began participating in the FCC's Emergency Broadband Benefit Program ("EBB") to help connect eligible households with high-speed Internet. The EBB program provides eligible low-income households with monthly credit of up to $50 towards Charter's various broadband service options and up to $75 for households on Tribal lands. We now participate in the Affordable Connectivity Program, which provides eligible low-income households with up to $30 per month towards Internet service.

Our Spectrum Enterprise Stay Connected K-12 program enables schools to offer high-speed, cable broadband Internet access directly to their students, educators, and staff in their own homes so learning and teaching are uninterrupted. Stay Connected K-12 combines the speed and reliability of Spectrum Internet with simplified program management as students' families and faculty members are not billed for the service. Stay Connected K-12 is flexible, allowing school districts to add students when needed, with no minimum term commitment on any of the connections.

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Accessible products and services

Charter's inclusive line of services and solutions are uniquely designed to empower each one of our customers. We are helping customers connect to what matters most with the latest technology to support their needs.

Based upon an internal analysis using American Community Survey data from the U.S. Census for 2014-2019,[17] more than one out of eight people in Charter's footprint have a disability. Our overall footprint rate for people with a disability is somewhat higher than the national average, and in some of our largest designated market areas[18] and pockets outside our largest cities, it is significantly higher. With this significant opportunity to serve people with disabilities through our accessibility offerings, we are committed to delivering high-quality programming and content and making our products fully accessible.

[17] American Community Survey Data is from the U.S. Census Bureau and is used to define the Charter footprint using the Zip Code Tabulation Area ("ZPTA").

[18] Designated market areas is a term used to define a company's television and radio markets within their service area.

The goal of the Spectrum Accessibility Center of Excellence is to create empowering and inclusive experiences for our customers and employees. We focus on designing universal product experiences that work for everyone. Our team of accessibility engineers – many of whom are native users of assistive technology themselves – create universal and accessible experiences in all phases of product and service development, deployment, sales, marketing, and customer support. In 2021, we launched a dedicated disability support team of agents in our El Paso, Texas call center to reduce call transfer rates and ensure specialized support for our customers with disabilities to enhance the overall customer experience.

Charter partners across the business to ensure that our customer-facing employees have the skills and confidence they need to support customers with disabilities. Our Accessibility Learning team provides accessibility training for the developers who work on our internal tools, and they partner with each business unit's learning teams so that customer-facing employees are familiar with disability etiquette and can provide education and support for product features that are frequently used by customers with disabilities, such as Guide Narration, Audio Description, Closed Captions, and more. We are also highly engaged with disability-focused advocacy groups and connect regularly with the customers we support.

In 2020, we announced the launch of Spectrum Access, a free application designed to provide entertainment access to persons with vision or hearing disabilities. The Spectrum Access application enhances the user entertainment experience by enabling customers to play audio description or closed captioning directly from their phone or tablet. The Spectrum Access application continued to grow its user base and content in 2021, extended features to include auto resync, and also won the inaugural award from the American Council of the Blind for audio description innovation.

The Accessibility Center of Excellence works closely with the Industrial Design team to make sure both hardware and consumer packaging are tested and as accessible as our software. In 2021, based on user feedback, we launched a remote overlay that simplifies the user experience by only exposing buttons essential to the video experience. This overlay is beneficial for those with a cognitive or visual disability, and for some seniors. In 2021, we also added a new feature to Spectrum Guide with Guide Narration that allows a customer to adjust the speech rate of the talking guide. This feature creates a better experience for customers who are blind or have low vision.

Additional customer commitments

Responsible marketing

We are committed to promoting our products and services responsibly by putting our residential and business customers at the forefront of everything that we do. This starts with ensuring Spectrum materials are created in a manner that complies with our legal and regulatory commitments as well as our own internal standards and policies. We ensure customer-facing marketing materials are truthful and accurate, and that they communicate the value of Spectrum products in a straightforward, easy to understand manner. Refer to our Responsible Marketing Principles for further information on this commitment.

Customer satisfaction

We are committed to customer satisfaction through first-rate customer service and thorough complaint resolution processes. Customers with a question or complaint may contact us via phone, chat, or U.S. Postal Service; we also offer a 24-hour hotline, maintained by a third party, which allows whistleblowers, employees, contractors, vendors, customers, and others to raise concerns. Customer complaints, including those received from regulatory agencies and Charter's senior executives, are taken very seriously with our rigorous, best-in-class process to address customer complaints immediately and efficiently by assessing the customer's concerns and researching previous interactions to determine the series of events and next steps. Additionally, the learnings from this process are leveraged to drive people, process, and technology improvements across the organization and deliver an excellent customer experience. Charter has a dedicated Customer Complaints team that facilitates the complaint handling process. Our process involves extensive review of the customer's experience, identification of root cause(s), and expeditious resolution of all customer issues.
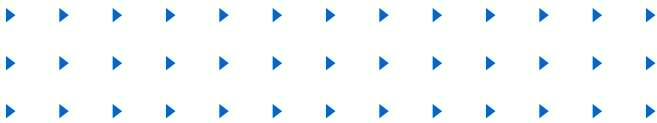
SASB Index

The table below contains Charter's reporting of our ESG performance with reference to the framework for the Telecommunications Services industry standard. We do not currently disclose all indicators included in the standard but have focused on those most relevant to Charter where we have sufficient information. We will continue to evaluate areas for additional disclosure in the future. All data is as of (or for) the year ended December 31, 2021, unless otherwise noted.

Activity metrics

Activity metric	SASB code	Charter's response
Number of wireless subscribers	TC-TL-000.A	Total mobile lines: 3,564,000 • Residential: 3,448,000 • Small and medium business: 116,000 For more information, please see our Form 10-K for the year ended December 31, 2021.
Number of wireline subscribers	TC-TL-000.B	Total video customers: 15,833,000 • Residential: 15,216,000 • Small and medium business: 617,000 Total Voice customers: 9,903,000 • Residential: 8,621,000 • Small and medium business: 1,282,000 For more information, please see our Form 10-K for the year ended December 31, 2021.
Number of broadband subscribers	TC-TL-000.C	Total Internet customers: 30,089,000 • Residential: 28,137,000 • Small and medium business: 1,952,000 For more information, please see our Form 10-K for the year ended December 31, 2021.
Network traffic	TC-TL-000.D	205,611 petabytes[19]

Other indicators

Topic	Accounting metric	SASB code	Charter's response
Environmental footprint of operations	Total energy consumed	TC-TL-130a.1	15,242,358 gigajoules
	Percentage grid electricity		67%
	Percentage renewable		Immaterial – please see Renewable energy for more information.
Data privacy	Description of policies and practices relating to behavioral advertising and customer privacy	TC-TL-220a.1	Please see Protecting customer data, privacy, and security.

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[19] Charter calculates an average to peak throughput ratio based on daily average and daily peak throughput. The average-to-peak ratio is multiplied against the peak for each day in the year, which is then summed for our total annual volume.

SASB Index

Other indicators (continued)

Topic	Accounting metric	SASB code	Charter's response
Data privacy	Total amount of monetary losses as a result of legal proceedings associated with customer privacy	TC-TL-220a.1	Charter discloses all material legal proceedings in our SEC filings. In 2021, Charter did not disclose any monetary losses as a result of legal proceedings associated with customer privacy.
Data security	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	TC-TL-230a.2	Please see Protecting customer data, privacy, and security.
Product end-of-life management	Materials recovered through take back programs	TC-TL-440a.1	29,046 metric tons[20]
Competitive behavior and open Internet	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	TC-TL-520a.1	Charter discloses all material legal proceedings in our SEC filings. In 2021, Charter did not disclose any monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations.
	Average actual sustained download speed of (1) owned and commercially-associated content and (2) non-associated content	TC-TL-520a.2	Charter does not favor certain content and thus, the download speed of (1) owned and commercially-associated content and (2) non-associated content is the same. Charter participates in the FCC Measuring Broadband America Fixed Broadband Report and has speed test results published in the report. The report can be found on the FCC website.
	Description of risks and opportunities associated with net neutrality, paid peering, zero rating, and related practices	TC-TL-520a.3	Charter supports an open Internet as an integral part of our commitment to deliver a superior broadband experience to our customers. We would support Congress passing legislation that sets forth clear, enforceable, and permanent rules to preserve an open Internet within a modern regulatory framework that encourages infrastructure investment and innovation. Charter's public statements on the open Internet can be found on our Policy website.
Managing systemic risks from technology disruptions	Discussion of systems to provide unimpeded service during service interruptions	TC-TL-550a.2	Please see Continuously upgrading the resilience and reliability of our network.

[20] | The metric includes the weight of CPE collected by Charter's third-party vendors for in-warranty repairs. Charter reports this data by weight, not percentage.

TCFD Index

The below table is a summary of our ESG activities with reference to the recommendations of the TCFD. Our 2021 CDP Climate Change Survey Response, available on our ESG website, contains additional information on our climate-related activities. For convenience, we provide references to 2021 CDP questions as they overlap with the TCFD guidelines. We continue to evaluate areas for additional disclosure and plan to disclose information in our 2022 CDP Climate Change Survey Response.

Section	TCFD disclosure recommendations	Content in this report	CDP question #
Governance	Disclose the organization's governance around climate-related risks and opportunities.	The Nominating and Corporate Governance Committee oversees ESG matters and receives quarterly reports from management regarding ESG and climate strategy progress. The Audit Committee reviews our ERM program on a regular basis, which includes reviewing threats to our network and our business, such as business continuity risks, including extreme weather. Management and the Audit Committee regularly report to the Board regarding the ERM program. In addition, the CEO, who also serves as the Board Chair, receives regular reports regarding ESG and climate strategy progress. Senior management receives climate strategy updates from the business through our ESG ESC and OSC. We have two cross-functional, climate-related committees that report to the OSC. These committees, chaired by leaders in our Corporate Services and Sustainability functions, meet regularly. One committee oversees data collection and calculation related to our scope 1, 2, and 3 emissions. The second committee collects initiatives directed at efficiency that impact Charter's carbon neutral goal. Sustainability leads these committees and collaborates with business divisions as they develop and align towards climate-related business strategies required to achieve our goal to be carbon neutral in our operations by 2035. For more information about our governance practices, please see ESG governance and Climate governance.	C1.1b, C1.2, C1.2a
Risk Management	Disclose how the organization identifies, assesses, and manages climate-related risks.	In 2021, we conducted a climate risk and opportunity assessment, an extension of our ERM process, which evaluates both the likelihood and the severity of risks in order to determine the overall impact of a given risk. Please see our CDP Climate Change Survey Response for more information. Specific aspects of climate risk, most notably the impact of physical climate risks, are considered in our ERM and incident assessment processes. Please see Managing risk, reliability, and resilience for more details.	C2.1, C2.2, C2.2a

TCFD Index

Other indicators (continued)

Section	TCFD disclosure recommendations	Content in this report	CDP question #
Strategy	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	Transition risk and opportunities: Our risk and opportunity assessment studied the impact of transition risks, such as carbon regulation on our operations, fleet, and value chain, as well as the technology, legal, market, and reputational risks associated with the transition to a low-carbon economy. To help manage these risks, deliver on our operational efficiency objective, and deliver on our environmental commitment to the communities we serve, in 2021, we committed to a goal to be carbon neutral in our operations by 2035. For more information about our goal and our strategy, please see Investing in the efficiency of the network to provide affordable services. Physical risk: Our assessment also included the incremental nature of climate impacts from acute and chronic physical risks. For more information about our approach to managing physical risk resilience, please see Continuously upgrading the resilience and reliability of our network.	C2.1a, C2.3, C2.4, C3.1, C3.2, C3.2a, C3.3, C3.4
Metrics and Targets	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities.	In 2021, we committed to a goal to be carbon neutral in our operations by 2035. Please see Investing in the efficiency of the network to provide affordable services for more information about our climate-related metrics and goals. Please see Understanding our sources of GHG emissions for details of our scope 1, scope 2, and select scope 3 GHG emissions, and relevant calculation methodologies.	C4.1, C4.2, C6.1, C6.3, C6.5