



# 2021 Industry Report on GHG Emissions

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December 2021

**Consumer Technology  
Association**<sup>™</sup>

# Introduction

The consumer technology industry is essential to ensuring our planet's sustainability and resilience while empowering individuals to reduce their own impacts. Consumer technology companies are challenging themselves to be part of the solution in fighting climate change, setting ambitious targets to reduce the carbon emissions produced by their organizations and value chains. Our industry also provides solutions to other sectors to reduce their climate change impacts such as enabling remote and telework options; providing transparency to household energy impacts leading to actionable change; and deploying machine learning and artificial intelligence to make all the systems that support our daily lives more efficient.

Our industry is not only making commitments but delivering on those commitments. Between 2018 and 2019, Consumer Technology Association's (CTA)<sup>®</sup> members reduced their Scope 1 and 2 worldwide GHG emissions by 6.7%, while the industry experienced economic growth of 3.5%. Although overall Scope 1, 2 and 3 worldwide GHG emissions increased, the trends demonstrate that most CTA member companies are decreasing their emissions and more companies are meeting the emissions reduction goals they've publicly reported.

Additionally, companies are demonstrating climate leadership through their emissions-reduction initiatives with almost 50% of CTA member companies receiving an 'A/A-' ranking from CDP, an independent organization that helps companies track their environmental impact. For context, only 3% of all companies submitting data to CDP received an A/A-. Almost half of CTA member companies have approved science-based targets to meet

Paris Agreement emission reduction levels. We are also seeing the continuation of the reduction in U.S. Scope 1 and 2 emissions with a 24% decrease from the 2016 baseline data when CTA began tracking emissions on behalf of member companies.

Yet even as we celebrate the above progress, we acknowledge much more work remains. That's why CTA remains committed to do the following:

- Measure GHG emissions produced by the consumer technology industry on an annual basis as reported through and vetted by a third-party organization (e.g., CDP).
- Track and publicly report on the combined progress made by CTA members in reducing GHG emissions on a year-over-year basis as well as highlighting individual company initiatives.
- Recognize the climate program achievements of individual CTA members – from those just starting on the journey to those already demonstrating extraordinary performance.
- Encourage members who have not yet either assessed their emissions or developed mid-term or long-term goals for GHG emission reductions to do so.

As part of our commitment to this initiative, CTA presents this third annual report quantifying GHG emissions data from CTA member companies who publicly disclosed their 2019 emissions data (as reported in 2020). We are proud to highlight the collective and individual accomplishments of our members in reducing GHG emissions year-over-year, both in the U.S. and across the globe.



# Innovation Leading the Way

## The Trends

CTA is committed to tracking and publicly reporting on the progress made by members in reducing GHG emissions on a year-over-year basis. We are an industry that rises to meet challenges and follows through on our commitments. Where there have been setbacks, we anticipate future progress from members. Where members have made progress, we anticipate their continued leadership in the fight against climate change.

Three years of tracking show CTA members continue to make an impact compared to 2016 baseline data.

↓ **24%** decrease in U.S. Scope 1 and 2 emissions between 2016 and 2019.

↑ **3.7%** increase in worldwide Scope 1, 2, and 3 emissions between 2016 and 2019.

↓ **3.3%** decrease in U.S. Scope 1 and 2 emissions between 2018 and 2019.<sup>1</sup>

↓ **6.7%** decrease in worldwide Scope 1 and 2 emissions between 2018 and 2019.

↑ **2.6%** increase in worldwide Scope 1, 2 and 3 emissions between 2018 and 2019.

↑ **47** of CTA members reporting to CDP received 'A/A-' rankings.<sup>2</sup>

↑ **42** CTA members have approved emissions reduction targets via the Science Based Targets Initiative (SBTi) – a significant increase from 27 reported in CTA's 2020 report.

Scope 1 GHG emissions are the direct emissions from sources owned or controlled by a company (e.g., facilities, vehicles).

Scope 2 GHG emissions are indirect emissions from energy generation.

Scope 3 GHG emissions are emissions from sources not owned or controlled by a company including value chain emissions.

## SAMSUNG

In 2019, Samsung joined the CDP Supply Chain Program and surveyed the status of GHG emissions and renewable energy use of its suppliers that accounted for 80% of all its business transactions. Samsung incentivizes suppliers who meet the CDP standards for information disclosure and establish GHG emission reduction goals.



# Leading the Industry

CTA members are committed to reducing GHG emissions and ensuring those commitments are science-based and aligned with the level of reductions needed to keep global temperature increases below two degrees Celsius.

## THE INNOVATORS

CTA is proud to recognize its members who have approved targets from the Science Based Target initiative (SBTi)<sup>3</sup>. This year includes 15 additional companies with approved targets from our 2020 report for a total of 42 CTA member companies with approved SBTi targets. This is a significant accomplishment, and we applaud all these industry leaders.

- **Accenture**
- **Adobe Inc.**
- **Advanced Micro Devices Inc.**
- **Analog Devices Inc.**
- **Apple**
- **AT&T Inc.**
- **Autodesk Inc.**
- **Best Buy Co. Inc.**
- **BMW**
- **Cisco Systems Inc.**
- **Colgate Palmolive Company**
- **CVS Health**
- **Dell Technologies**
- **Deloitte**
- **Facebook Inc.**
- **Ford Motor Company**
- **General Motors**
- **Grant Thornton UK LLP**
- **Hitachi**
- **HP Inc.**
- **International Flavors & Fragrances, Inc.**
- **Lenovo**
- **L’Oreal**
- **Mercedes-Benz AG**
- **Michelin**
- **Microsoft Corporation**
- **Navitas Semiconductor Ltd.**
- **Nikon Corporation**
- **NTT DATA Corporation**
- **Panasonic Corporation**
- **Proctor & Gamble**
- **Robert Bosch GmbH**
- **Schneider Electric**
- **Sharp Corporation**
- **SoftBank Corporation**
- **Sony Corporation**
- **STMicroelectronics NV**
- **T-Mobile USA Inc.**
- **Verizon**
- **Volkswagen AG**
- **Walmart Inc.**
- **Yamaha Corporation**

CTA recognizes several members who have submitted letters of commitment to SBTi. We look forward to spotlighting them soon for their approved SBTi targets.

- **AbbVie**
- **Amazon**
- **Anthem**
- **APTIV**
- **Boston Consulting Group**
- **Logitech International**
- **Magna International**
- **Netflix**
- **OMRON Corporation**
- **PricewaterhouseCoopers International Limited**
- **SK Telecom**
- **SOMFY**
- **Twitter Inc.**
- **Visa Inc.**

## THE LEADERS

CTA applauds the following 47 companies who received 'A/A-' rankings from CDP - meaning their reported GHG emissions data was comprehensive and based on sound methodology. This is no small accomplishment – almost 50% of CTA member companies received an 'A/A-' ranking.<sup>5</sup> For perspective, 3% of all companies reporting to CDP received this recognition.

- **Accenture**
- **Adobe Inc.**
- **Alphabet Inc.**
- **Analog Devices Inc.**
- **Apple Inc.**
- **AT&T Inc.**
- **Autodesk Inc.**
- **Best Buy Co. Inc.**
- **BMW AG**
- **Canon Inc.**
- **Cisco Systems Inc.**
- **Colgate Palmolive Company**
- **CommScope Inc.**
- **Coway Co. Ltd.**
- **CVS Health**
- **Dell Technologies**
- **Fiat Chrysler Automobiles NV**
- **Ford Motor Company**
- **General Motors Company**
- **HP Inc.**
- **Honda Motor Co. Ltd.**
- **Humana Inc.**
- **Intel Corporation**
- **International Business Machines (IBM)**
- **International Flavors & Fragrances Inc.**
- **Lenovo Group**
- **L'Oreal**
- **Microsoft Corporation**
- **Michelin**
- **Nikon Corporation**
- **Nissan Motor Co. Ltd.**
- **Nordic Semiconductor ASA**
- **NTT Data Corporation**
- **NVIDIA Corporation**
- **OMRON Corporation**
- **Robert Bosch GmbH**
- **Samsung Electronics**
- **Schneider Electric**
- **SoftBank Corporation**
- **Sony Corporation**
- **TDK Corporation**
- **T-Mobile USA Inc.**
- **Toyota Motor Corporation**
- **Walmart Inc.**
- **Visa**
- **Volkswagen AG**



In September 2019, the Science Based Targets Initiative certified Microsoft's target to reduce Scope 3 GHG emissions intensity per unit of revenue by 30% by 2030 from a 2017 base year and to avoid growth in absolute Scope 3 emissions. In January 2020, as part of Microsoft's Carbon Negative by 2030 commitment, the company announced that it will cut Scope 1 + Scope 2 + Scope 3 emissions by more than half by 2030, and its science-based target will help the company reach this goal.

# The Deep Dive

## U.S. Year-over-Year Emissions Summary

The summary below of U.S. Scope 1 and 2 emissions data compares 2018 and 2019 emissions (as publicly reported to CDP in 2019 and 2020).<sup>6</sup> Twenty-seven CTA members with electronics as their core business reported U.S. data to CDP across both years.<sup>7</sup> These companies continue the downward trend of reducing Scope 1 and 2 emissions from U.S. operations with a decrease of 3.3% between 2018 and 2019.

CO2E EMISSIONS	METRIC TONS 2018	METRIC TONS 2019	% CHANGE
Scope 1	4,105,097	4,013,883	-2.20%
Scope 2	12,764,131	12,305,746	-3.60%
<b>Total Scope 1&amp;2</b>	<b>16,869,228</b>	<b>16,319,629</b>	<b>-3.30%</b>

Compared to baseline data for 2016, CTA member companies demonstrated a 24% decrease in U.S. Scope 1 and 2 emissions.<sup>8</sup> This significant achievement highlights the continued commitment by member companies to reduce emissions from U.S. owned or controlled operations.

## Global Year-over-Year Emissions Summary

Over the short term, the vast growth of businesses – especially in new markets with huge expansions and emerging technologies – presents challenges to global reductions in GHG emissions. While we saw a continued decrease in Scope 1 and 2 emissions worldwide, an increase in Scope 3 emissions led to overall worldwide emissions increase between 2018 and 2019.<sup>9</sup> Global emissions are impacted by a variety of factors – increase in reporting of Scope 3 subcategories, mergers and acquisitions and increases in outputs – but trends demonstrate that companies are increasing their use of renewable energy and investing in emissions reduction projects, positive steps toward a more sustainable future.

**COMPARED TO BASELINE DATA FOR 2016, CTA MEMBER COMPANIES DEMONSTRATED A 24% DECREASE IN U.S. SCOPE 1 AND 2 EMISSIONS.**



Dell launched several sustainability targets in 2019. The company will source 100% of its electricity from renewable sources by 2040 and intends to cut emissions from its operations and its electricity usage in half by 2030.

CO2E EMISSIONS	METRIC TONS 2018	METRIC TONS 2019	% CHANGE
Scopes 1&2	64,783,824	60,463,141	-6.7%
Scope 3	1,179,855,235	1,216,668,534	3.1%
<b>Total</b>	<b>1,244,639,059</b>	<b>1,277,141,675</b>	<b>2.6%</b>

## Playing for the Planet Initiative:

In 2019, the United Nations Environment Programme (UNEP) launched the Playing for the Planet Alliance in partnership with the gaming industry to “...explore how [industry] can inspire young people to learn and act in support of the environment.”<sup>11</sup> Under the initiative CTA members such as Microsoft and Sony – which publicly report to CDP – have made individual commitments to reduce the impact of the gaming ecosystem on the environment including GHG emissions reductions.

## Summary

Monitoring our changing climate – and industry’s response and solutions - has never been more important. By tracking the progress tech companies have made toward reducing carbon emissions, we can ascertain how our industry can make a positive impact on our planet, quantify where the most progress has been made and where additional improvement is needed.

While global challenges remain, we can still be optimistic about our industry’s position as a model for a sustainable future. As this report shows, tech companies have made progress in several key areas including more efficient manufacturing and distribution methods, a growing commitment to renewable energy and reducing emissions in the United States.

The tech industry is driving solutions needed to curb climate change – such as innovations in more efficient battery technologies and smart infrastructure to support the sustainability and resiliency of cities and our homes.

Each year at CES®, the global stage for innovation, we celebrate how technology creates a more sustainable way of life for everyone. We understand transformation is incremental, CTA is proud of our members for leading the way to sustainability one step at a time. These efforts will benefit consumers and the planet for generations to come.

To learn more about the industry’s sustainability efforts, visit **CTA.tech**.

# Appendix

**Methodology:** The following summarizes how CTA analyzes and presents the publicly reported CDP data from our member companies.

- CTA is committed to full and transparent reporting on its methodologies.
- For each annual report, CTA analyzes and presents publicly reported data obtained directly from CDP. **CTA will only focus on CDP data from CTA member companies whose primary business involves one or more phases of consumer electronics technology – from manufacturing to retailing electronics products or providing technology services.**
- In presenting CDP data,
  - CDP 2020 Reporting: Reflects company emissions from calendar year 2019
  - CDP 2019 Reporting: Reflects company emissions from calendar year 2018
  - CDP 2018 Reporting: Reflects company emissions from calendar year 2017
  - CDP 2017 Reporting: Reflects company emissions from calendar year 2016
- For Year-Over-Year Numbers, companies included have provided reporting figures for both the current and prior year. By comparing only continuing participants, each year will provide meaningful comparison against previous year's results.
- CTA has not included any individual company CDP reported data. All reported data is aggregated data for electronics companies.
- Individual companies are highlighted in recognition for CDP A/A- ranking and SBTi. This includes all CTA members, not just those whose primary business involves consumer electronics technology.



# References

- <sup>1</sup> As reported to CDP in 2019 and 2020. GHG emissions data as reported through CDP and reflected in this report includes data from CTA members whose primary business involves one or more phases of consumer electronics technology – from manufacturing to retailing electronics products, or providing technology services.
- <sup>2</sup> CTA recognizes all member companies for their CDP rankings and SBTi targets, not just those whose primary business involves one or more phases of consumer electronics technology.
- <sup>3</sup> SBTi is a joint program of CDP, World Resources Institute and World Wildlife Fund with the goal of promoting emission reductions sufficient for each participant to meet its quota for reaching Paris Agreement reductions necessary to meet 2 degrees C limit. Once SBTi approves company plans, it sets company emission targets.
- <sup>4</sup> CDP ranking based on assessment of level of details provided to CDP responses; comprehensiveness of content/data provide; company awareness of climate change issues, management methods and progress on climate change initiatives. Companies with A/A- rankings fall in the “Leadership level”.
- <sup>5</sup> In total, 95 CTA member companies including those whose core business falls outside electronics reported their 2019 emissions data to CDP in 2020.
- <sup>6</sup> Because of the widely dispersed sources of Scope 3 value-chain GHG emissions, there is no specific geographical breakout of Scope 3 emissions. To be included, companies must have reported to CDP in both 2019 (2018 emissions data) and 2020 (2019 emissions data).
- <sup>7</sup> Country specific data is not required by CDP.
- <sup>8</sup> The 2016 to 2019 comparison includes data from 16 CTA member companies with electronics as their core business that reported US data over the three-year period.
- <sup>9</sup> As publicly reported to CDP in 2019 and 2020. The 2018 to 2019 comparison on Scope 1 and 2 includes data from 52 CTA members companies with electronics as their core business and Scope 3 includes data from 51 CTA member companies with electronics as their core business. (One company reported 2018 Scope 1 and 2 emissions but not Scope 3 emissions accounting for the difference in numbers.)
- <sup>10</sup> The 2016 to 2019 comparison includes data from 33 CTA member companies with electronics as their core business that reported US data over the three-year period.
- <sup>11</sup> <https://www.unep.org/explore-topics/education-environment/what-we-do/playing-planet>

## About

**Consumer  
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### **Consumer Technology Association**

As North America’s largest technology trade association, CTA® is the tech sector. Our members are the world’s leading innovators – from startups to global brands – helping support more than 18 million American jobs. CTA owns and produces CES® – the most influential tech event in the world. Find us at CTA.tech. Follow us @CTAtech.

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