EA Engineering, Science, and Technology, Inc., PBC

2023

CARBON FOOTPRINT REPORT

Issued September 2024

OPENNESS | PRUDENCE | BALANCE | CHALLENGE

COVER PHOTOGRAPH ATTRIBUTION

About the Photographs
A summer landscape in Washington's Mount Baker-Snoqualmie National Forest is reflected in Picture Lake. Photographs taken by Kali Deck (Seattle, Washington).

About the Photographer
Kali Deck is an Environmental Technician supporting various site cleanup programs for EA's clients in the Pacific Northwest.

She graduated from the University of Kansas with degrees in Environmental Science and Economics, and joined EA in 2022. An avid hiker, Kali is on a mission to collect patches from every national park in the United States.

2023 CARBON FOOTPRINT REPORT

1.0 ABOUT EA

Headquartered in Hunt Valley, Maryland, EA Engineering, Science, and Technology, Inc., PBC (EA) is a 100 percent employee-owned, public benefit corporation (PBC) that provides environmental, compliance, natural resources, infrastructure engineering, and technology solutions to a wide range of public and private sector clients. In calendar year (CY) 2023, EA maintained a normalized headcount of 687 employees, based on full-time equivalents (FTEs)[1], working across a network of 27 commercial offices in the United States including Alaska, Hawaii, and the territory of Guam.

First initiated in 2009, EA published Carbon Footprint Reports biennially from CY 2009 through CY 2015, with each report summarizing two full CYs. Beginning with CY 2016, EA transitioned to annual reporting as an industry best practice of transparency.

2.0 GREENHOUSE GAS INVENTORY ASSESSMENT AND MANAGEMENT

2.1 Accounting Standards and Management Plan

This greenhouse gas (GHG) analysis has been prepared in accordance with the GHG Protocol Corporate Accounting and Reporting Standard[2] (hereafter referred to as the "Standards"), developed and published by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI). These Standards are the most widely used international accounting tool for governments and businesses to identify, quantify, and manage GHG emissions.

The Standards require accounting for the "Kyoto Protocol" GHG emissions: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and nitrogen trifluoride (NF_3)—which are reported in terms of carbon dioxide equivalents (CO_2e). Other gases with global warming potential may be included, but EA does not use or generate any other gases outside of those listed. This report accounts for CO_2 emissions, which represent the majority of GHG emissions from most sources, as well as CH_4 and N_2O (which together are referred to as the Big Three).

EA maintains an *Inventory Management Plan* (IMP) to ensure consistent analysis of data from year to year. In conjunction with EA's use of the U.S. Environmental Protection Agency (EPA) Simplified GHG Emissions Calculator (SGEC)[3] to determine yearly carbon footprint, the EPA Center for Corporate Climate Leadership's Simplified IMP Form (August 2020 version) is used for EA's IMP. The IMP serves multiple functions; it describes data collection procedures and

1. Calculations in this report that rely on personnel totals (e.g., solid waste and wastewater) are completed using a normalized FTE total of 687. Normalized FTE is calculated as EA's total Occupational Safety and Health Administration labor hours reported in 2023 divided by 2,080 (the number of hours in a typical full-time year assuming 52 standard 40-hour work weeks): 1,429,682 hours ÷ 2,080 hours per FTE = 687 FTE.
2. World Resources Institute and World Business Council for Sustainable Development. 2004. *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard. Revised Edition.* March. Available at: https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf.
3. EPA Center for Corporate Climate Leadership. Simplified GHG Gas Emissions Calculator. https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator. See also the companion guide: https://www.epa.gov/climateleadership/guide-greenhouse-gas-management-small-business-low-emitters.

data quality control measures; identifies data and other factors used to estimate GHG emissions associated with EA's business activities; summarizes EA's operations; details data collected for each GHG scope area; quantifies emissions calculation methods used; and outlines data management methods and verification process controls calculations. The IMP is an internal document that is updated annually by EA's Carbon Footprint Work Group, or more often as best practices dictate. The IMP is used to ensure annual GHG accounting and reporting are relevant, complete, consistent, transparent, and accurate.

2.2 Emissions Scopes

EA accounts for direct and indirect GHG emissions from its business operations in accordance with defined GHG scopes delineated in the Standards:

- ***Scope 1: Direct Emissions***—Direct GHG emissions that occur from sources controlled or owned by EA.
- ***Scope 2: Indirect Purchased Energy Emissions***—Indirect GHG emissions associated with purchased electricity, steam, heating, and cooling for EA's energy use. Energy sources are generated off-site and purchased from a utility or similar supplier.
- ***Scope 3: Other Indirect Emissions***—Indirect GHG emissions associated with the upstream (i.e., purchased or acquired) and downstream (i.e., connected with company service offerings) aspects of EA's value chain.

Scope 1: GHG emissions from EA's business operations include emissions from fleet vehicle operations, boat operations, and portable power generators; emissions associated with combustion of fuels used for heating offices and other buildings; and emissions of refrigerants from building heating and cooling systems. Emissions from energy use in residential "satellite offices" (i.e., officially designated home offices used by EA employees who do not work from an established commercial office) and remote telework are not included in Scope 1. These emissions are included in Scope 3, Category 7 (Employee Commuting).

Scope 2: Indirect GHG emissions arise from purchased energy (e.g., electricity, steam, heat, and cooling) and are the result of EA's company-wide energy use to heat, cool, and power commercial offices, laboratories, and warehouse spaces. Emissions arising from energy use at residential "satellite offices" and by remote teleworkers are addressed in Scope 3, Category 7 (Employee Commuting).

Scope 3: GHG emissions from other elements of EA's business operations arise by means of assets not owned or controlled by EA, and include all emissions sources not addressed within EA's Scope 1 and Scope 2 boundaries. EA's Scope 3 emissions are comprised of the Scope 1 and 2 emissions attributed to upstream (purchased or acquired) and downstream (connected with EA's service offerings) vendors, contractors, service providers, and others within EA's value chain. For most organizations, including EA, Scope 3 emissions represent the vast majority of GHG emissions.

EA's carbon footprint analysis has historically captured GHG emissions associated with many aspects of its value chain, including emissions arising from the following upstream and downstream components:

- Employee commutes to and from EA commercial office locations, and employee business travel using personal vehicles
- Employee business travel, inclusive of air, rail, rental car, employee-owned vehicles, public transit, and rideshare services
- Emissions arising from disposal of solid wastes, including recycling and composting, generated at EA offices and other work locations (e.g., at temporary field or project offices)
- Emissions arising from potable water consumption and wastewater treatment at EA office and warehouse locations
- Emissions arising from shipment of samples, work products, and other materials to and from EA offices and to client or project sites
- Emissions associated with elements of the supply and delivery chain and other activities

Beginning in CY 2021, EA elected to extend its Scope 3 emissions assessment to include complete quantification of its value chain GHG emissions. In accordance with GHG Protocol's *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*[4] and the *List of Corrections for Scope 3 Standard*[5], EA evaluated all 15 elements of the value chain not otherwise included in Scope 1 and Scope 2 emissions. This is considered by WBCSD and WRI to represent a complete organizational carbon footprint. Based on criteria outlined in the Scope 3 Standard, EA's Carbon Footprint Work Group determined that categories 10, 11, 13, 14, and 15 do not apply to EA's operations, and are therefore not included in EA's value chain emissions calculations.

Scope 3 emissions within value chains are comprised of eight upstream and seven downstream categories of GHG emissions, identified in ***Table 1*** with examples of EA's contributions to the category. EA's Scope 3 value chain includes emissions from EA commercial offices and laboratories.

Table 1. Scope 3 Supply Chain Categories and Representative Emissions Sources

Scope 3 Category	Representative Emissions Sources
1. Purchased Goods and Services	Vendors, service providers, and subcontractors.
2. Capital Goods	Laboratory and field equipment, boats and generators, and information technology equipment (e.g., computers, printers, and scanners).
3. Fuel and Energy-Related Activities	Fuel, purchased electricity, transmission emissions, and distribution emissions associated with upstream production and transportation. Fuel consumption is accounted for in EA's Scope 1 emissions and purchased electricity is accounted for in Scope 2.

4. WRI and WBCSD. 2011. *Corporate Value Chain (Scope 3) Accounting and Reporting Standard.* September. Available at: https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf.
5. WRI and WBCSD. 2013. *List of Corrections for Scope 3 Standard.* 2011. *Corporate Value Chain (Scope 3) Accounting and Reporting Standard: Supplement to the GHG Protocol Corporate Accounting and Reporting Standard*. May. Available at: https://ghgprotocol.org/sites/default/files/2022-12/List%20of%20Corrections%20for%20Scope%203%20Standard.pdf.

Scope 3 Category	Representative Emissions Sources
4. Upstream Transportation and Distribution	Transportation and distribution emissions associated with delivery of purchased goods and services (e.g., delivery of office supplies, laboratory materials, computer shipments).
5. Waste Generated in Operations	Solid waste generated during day-to-day office and field operations; historically, accounted for in EA's Scope 3 emissions calculations along with offsets associated with recycling and composting activities.
6. Employee Business Travel	Historically accounted for in EA's Scope 3 emissions calculations along with carbon credits typically purchased to offset a component of EA's annual employee business travel emissions. This category includes air, rail, rental car, and ride share emissions associated with any EA travel.
7. Employee Commuting *Note: EA calculates this category as Employee Commuting and Telework.*	Previously, employee commutes have been incorporated into EA's Scope 3 emissions calculations through an annual voluntary employee commuting survey. With an expanded hybrid workforce, EA also incorporates Scope 3 emissions associated with remote and hybrid work to account for emissions associated with EA "work from home" operations.
8. Upstream Leased Assets	Life-cycle emissions associated with construction of leased assets such as commercial office space, including refrigerant production.
9. Downstream Transportation and Distribution	Limited to transportation and delivery of products sold (e.g., shipping of technical reports prepared for clients).
10. Processing of Sold Products	Not applicable to EA's operations.
11. Use of Sold Products	Not applicable to EA's operations.
12. End-of-Life Treatment of Sold Products	Waste treatment and disposal of products such as technical reports produced in hard copy and electronic (e.g., compact disc or universal serial bus) format.
13. Downstream Leased Assets	Not applicable to EA's operations.
14. Franchises	Not applicable to EA's operations.
15. Investments	Not applicable to EA's operations.

2.3 Changes to Previous Year's Calculations

Calculations for the ***Purchased Goods and Services*** category (Scope 3, Category 1) incorporate the following updates to prior year data:

1. ***Updated Emissions Factor Dataset***—In CY 2022, EA calculated Scope 3, Category 1 emissions by applying Supply Chain GHG emission factors linked to four primary North American Industry Classification System (NAICS) codes. These codes were assigned to individual projects based on service line classifications linked to EA's finance and accounting data. Supply chain GHG emissions datasets[6] were used for the following four NAICS codes:
    a. Environmental Consulting Services (541620)

6. Ingwersen, W. and M. Li. Supply Chain Greenhouse Gas Emission Factors for U.S. Industries and Commodities. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-20/001, 2020. Accessed at: https://cfpub.epa.gov/si/si_public_record_Report.cfm?dirEntryId=349324&Lab=CESER.

b. Engineering Services (541330)

c. Environmental Remediation Services (562910)

d. Research and Development in the Physical, Engineering, and Life Sciences, excluding Nanotechnology and Biotechnology (541715).

2. ***Refined Calculation Methodology***—For CY 2023, EA refined the above methodology by assigning NAICS codes to each project based on its primary scope of work rather than EA's service line designation. This results in the application of emissions factors more closely aligned with the services performed on client engagements. For example:

   a. Field sampling efforts not requiring the use of heavy equipment, which had previously been mapped to NAICS 562910 (Environmental Remediation Services), are coded to NAICS 541620 (Environmental Consulting Services)

   b. Engineering design projects not requiring field data collection, which had previously been mapped to NAICS 541330 (Engineering Services), are coded to NAICS 541620 (Environmental Consulting Services).

The assignment of emissions factors more closely aligned to CY 2023 work conducted results in avoidance of an overstatement of Scope 3, Category 1 emissions by approximately 1,308 metric tons of carbon dioxide equivalents ($MTCO_2e$), or 8.1 percent of CY 2023 Scope 3, Category 1 (Purchased Goods and Services) emissions.

3.0 2023 Carbon Footprint Reporting

EA has used the EPA Center for Corporate Climate Leadership SGEC since 2019. The SGEC is a spreadsheet-based, menu-driven tool for calculating GHG emissions. The tool is updated by EPA, as warranted, to improve utility and representativeness. For this assessment, EA employed the May 2023 update to the tool. Since the SGEC tool does not account for GHG emissions from water and wastewater, EA has opted to include a customized entry in the tool to account for these contributions.

3.1 Reporting Overview

Under the EPA Mandatory GHG Reporting Rule (Part 98 of Title 40 of the Code of Federal Regulations), most GHG sources are only required to report to EPA if their direct emissions (i.e., Scope 1) exceed 25,000 $MTCO_2e$ per year. Since 2009, EA has calculated and publicly reported its GHG emissions (carbon footprint) in accordance with the Standards. EA's gross GHG emissions have increased significantly due to consistent organic growth and the inclusion of total supply chain emissions, as discussed in ***Section 2.2*** and ***Table 1***. However, direct (Scope 1) emissions remain well under the 25,000-$MTCO_2e$ threshold for mandatory reporting to EPA.

This report incorporates actual utility data (i.e., electricity, natural gas, water, and wastewater) for EA's corporate headquarters location (Hunt Valley, Maryland), representing approximately 38 percent of commercial office space leased by EA, as well as office-specific utility data from many of the remaining EA's nationwide commercial offices. Where office-specific data were not available, assessments of office-specific emissions were reliant on regional energy use intensity and adjustment related factors.

3.2 Purchased Offsets

Carbon offsets are reduction credits that decrease net emissions through activities such as recycling and composting. Offsets, including Renewable Energy Certificates (RECs)[7], are used to compensate for an organization's Scope 2 emissions. They do not account or take credit for emissions that were prevented as a result of limiting or eliminating a specific emissions-generating activity. In 2023, EA offset approximately 1,238 $MTCO_2e$ through purchased carbon offsets that fall into three categories:

1. ***Air Travel Offsets (Annual Purchase)***—EA purchased 200 $MTCO_2e$ of verified carbon offsets from TerraPass[8] to partially offset the impact of business air travel. All TerraPass carbon offsets, which support United States-based projects, have been verified by independent third parties and standards including the Gold Standard, Verified Carbon Standard, Climate Action Reserve, and American Carbon Registry. This is an increase of 50 $MTCO_2e$ over purchases from previous years to account for continued headcount growth.
2. ***Waste Offsets***—In the third and fourth quarters of CY 2023 EA began the process of rightsizing its Hunt Valley, MD headquarters office square footage by approximately 50 percent to accommodate its workforce more efficiently in the post-COVID hybrid work environment. To offset a portion of the waste generated during the effort, EA purchased 100 $MTCO_2e$ of Green-e® Climate Certified Carbon Offsets from TerraPass.
3. ***RECs (Annual Purchase)—***A REC is a tradeable asset that represents the environmental attributes of 1 megawatt hour (MWh) of renewable electricity. RECs are sold separately from actual power generated to entities who want to invest in responsible renewable energy projects. To offset 2023's Scope 2 emissions, EA has matched 100 percent of traditional (non-renewable) electricity with 2,500 MWh of CleanBuild™ Wind through the purchase of Green-e Certified RECs from Carbon Solutions Group[9]. Purchase of these RECs offset approximately 938.4 $MTCO_2e$[10] of EA's carbon emissions while advancing energy security and independence through support of U.S.-based wind energy projects.

Copies of EA's 2023 certificates for purchased offsets are provided in ***Appendix A.***

Figure 1 provides a comparison of EA's gross Scope 1, 2, and 3 emissions (represented as $MTCO_2e$) for CYs 2023 and 2022. Additionally, ***Appendix B*** provides EA's full emissions summary generated from the use of EPA's Center for Corporate Climate Leadership SGEC.

7. RECs are tradeable assets that represent the environmental attributes of 1 MWh of renewable electricity. RECs are sold separately from actual power generated to consumers who want to "green" their existing power sources by contributing to the use of renewable energy sources.
8. https://www.terrapass.com/.
9. https://www.carbonsolutionsgroup.com/.
10. Calculation assumes use of eGRID GHG annual non-baseload output emission factor of 0.8275 pounds (lbs) of CO_2 (as averaged for all EA office locations) avoided per kWh. As such, 2,068,750lbs of avoided CO_2 converts to 2,068,750 lbs ÷ 2,204.62 lbs per metric ton = 938.37 $MTCO_2e$. eGRID data is available at: https://www.epa.gov/egrid/data-explorer.

Figure 1. Comparison of Gross $MTCO_2e$ by Scope—Calendar Year 2022 and 2023 (Shown as total $MTCO_2e$ and percentage of overall emissions for each year.)

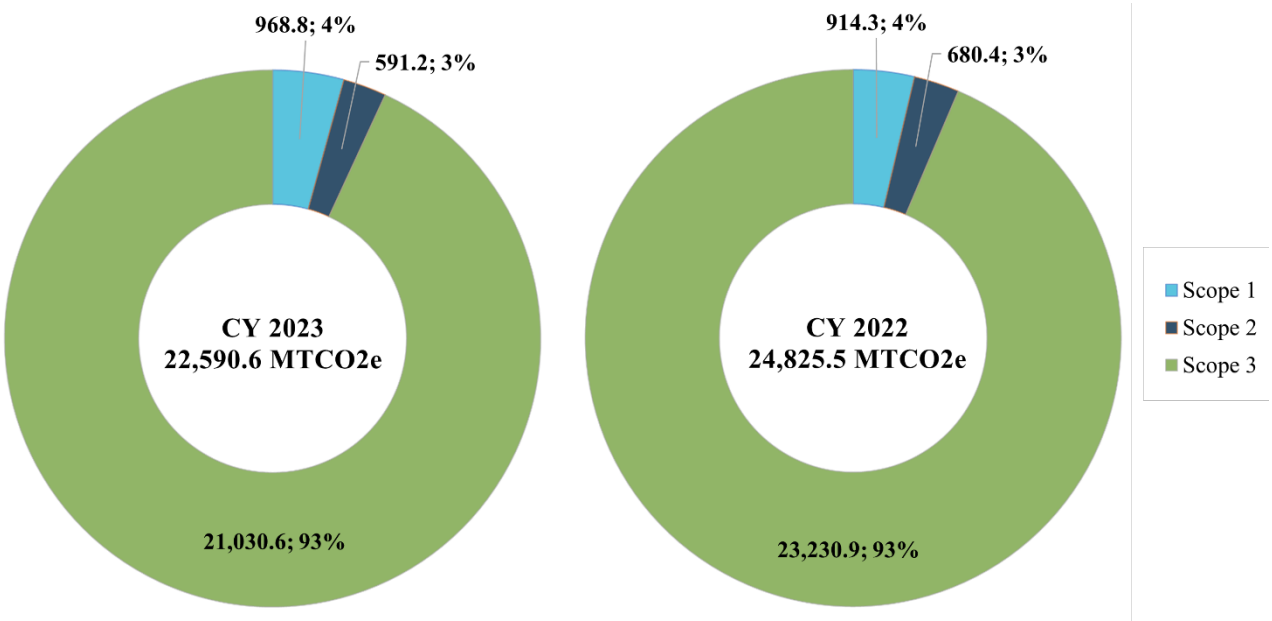


Figure notes: Pie charts depict comparison of gross emissions and associated percentages for all emissions scopes included within EA's Carbon Footprint for calendar year (CY) 2023 (on the left) and 2022 (on the right). Corresponding data for the comparisons are included in Table 2 and Table 3.

4.0 SUMMARY OF EA'S 2023 CARBON FOOTPRINT

In 2023, with the expansion of Scope 3 value chain emissions described in ***Table 1***, EA's total operational carbon footprint has been estimated at a gross total of 22,590.6 $MTCO_2e$. This is a 9.9 percent decrease from 2022 gross emissions (24,825.5 $MTCO_2e$), with much of the reduction associated with refinements to Scope 3 emissions calculation methodologies as noted in ***Section 2.3***. The decrease occurred over the same time period in which EA experienced a 4.2 percent increase in full-time equivalent headcount.

Approximately 5.5 percent (1,238.4 $MTCO_2e$) of these emissions were offset, resulting in resulting in net operational GHG emissions of 21,352.2 $MTCO_2e$. Approximately ***93.1 percent of EA's estimated gross carbon footprint is from Scope 3 sources—consistent with industry trends***[11] that suggest total Scope 3 emissions can represent between 65 percent and 95 percent of reporting companies' total GHG emissions.

In 2023, EA's top three emissions sources were:

1. ***Purchased Goods and Services*** (Scope 3, Category 1; 14,903.7 $MTCO_2e$)
2. ***Fuel and Energy-Related Activities*** (Scope 3, Category 3; 3,643.0 $MTCO_2e$)
3. ***Employee Business Travel*** (Scope 3, Category 6; 1,027.3 $MTCO_2e$)

11. https://www.cnbc.com/2021/08/18/apple-amazon-exxon-and-the-toughest-carbon-emissions-to-capture.html.

Table 2 summarizes EA's carbon footprint trends in $MTCO_2e$ and FTEs over the past five years.

Table 2. Carbon Footprint Trends at EA over the Last Five Years

Calendar Year	2023	2022	2021	2020	2019
Gross Emissions[(a)]	22,590.6	24,825.5	18,271.5	2,829.3	4,690.6
Carbon Offsets[(a)]	-1,238.4	-948.6	-1,026.3	-1,241.0	-1,230.7
Net Emissions[(a)]	21,352.2	23,876.9	17,245.2	1,588.3	3,459.9
Number of FTE Employees	687	659	592	585	540

(a) Results reported in $MTCO_2e$

Figure 2 illustrates EA's total 2023 Carbon Footprint for all emissions sources (expressed as percent total of each category of emissions) and ***Table 3*** summarizes the findings of EA's CY 2023 Carbon Footprint Report.

Figure 2. Emission Sources Expressed by Percentage of Total 2023 Carbon Footprint

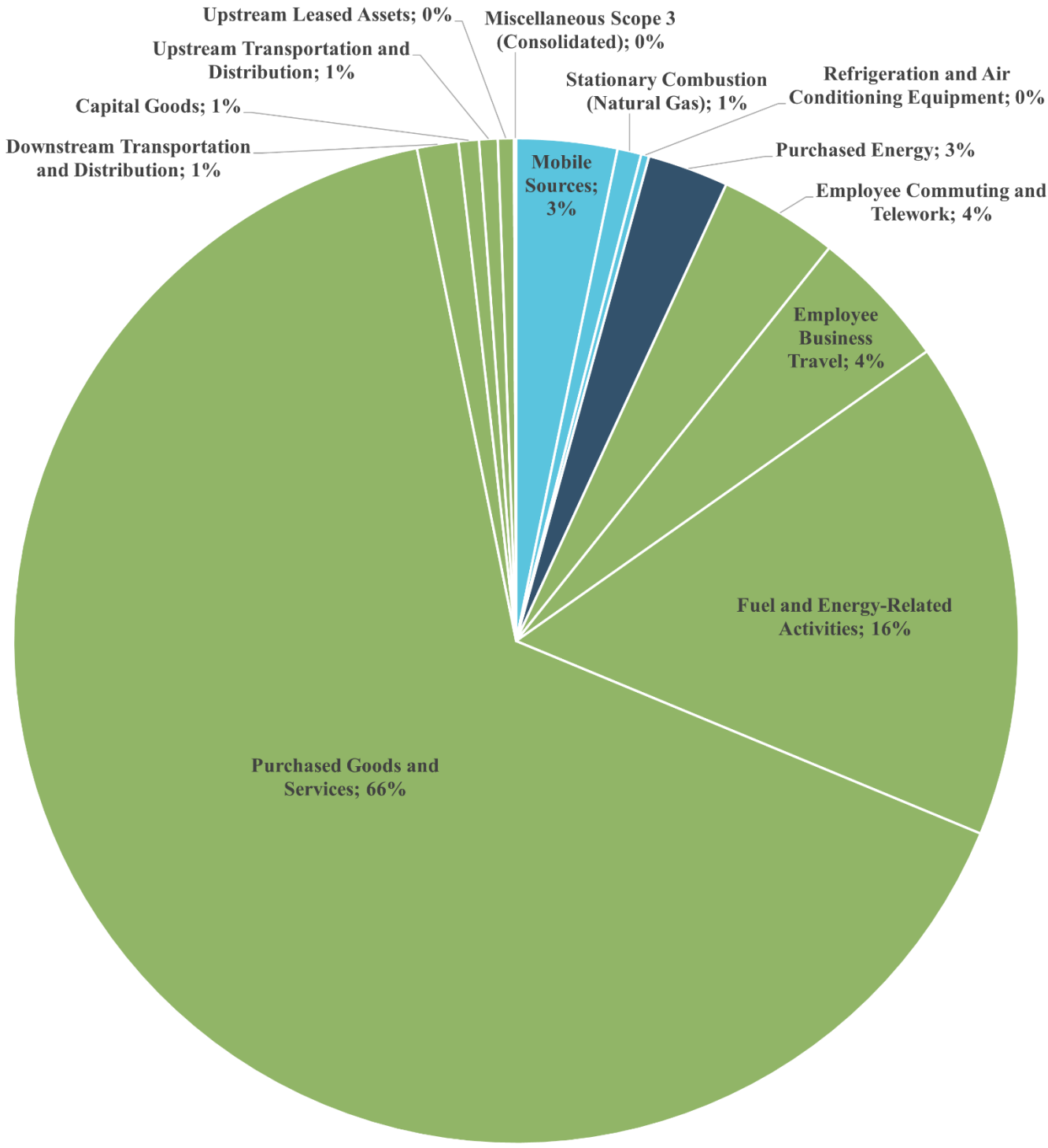


Figure notes: Pie chart depicts EA's overall carbon footprint illustrating the percentage of each individual emissions type as part of the company's gross emissions. Corresponding data for the percentages are included in ***Table 3****.*

Scope 3 emissions categories in ***Table 3*** *that account for less than 0.1 percent of EA's total emissions each have been consolidated into a "Miscellaneous Scope 3" data wedge that includes Solid Waste Disposal, End-of-life Treatment of Sold Products, Potable Water, and Wastewater Treatment.*

Table 3. Summary of Emissions and Offsets Contributing to EA's 2023 Carbon Footprint

Emissions Sources	2023 Total ($MTCO_2e$)	2023 Total (Percent)	2022 Total ($MTCO_2e$)
Scope 1: Direct GHG Emissions			
Mobile Sources	735.8	3.3	569.5
Stationary Combustion (Natural Gas)	174.7	0.8	286.5
Refrigeration and Air Conditioning Equipment	58.3	0.3	58.3
Fire Suppression	0.0	0.0	0.0
Purchased Gases	0.0	0.0	0.0
Scope 2: Indirect Purchased Energy Emissions			
Purchased Electricity and Steam	591.2	2.6	680.4
Scope 3: Other Indirect GHG Emissions			
Purchased Goods and Services	14,903.7	66.0	18,085.4
Capital Goods	148.2	0.7	106.1
Employee Commuting and Home Offices	872.8	3.9	702.0
Employee Business Travel[(a)]	1,027.3	4.5	1,019.3
Solid Waste Disposal	3.7	0.0	1.9
Downstream Transportation and Distribution (Shipping)	302.8	1.3	N/A[(b)]
Upstream Transportation and Distribution	0.6	0.0	162.1
End-of-Life Treatment of Sold Products	1.1	0.0	0.5
Potable Water	3.7	0.0	4.3
Upstream Leased Assets	117.3	0.5	133.3
Fuel and Energy-Related Activities	3,643.0	16.1	3,008.5
Wastewater Treatment	6.4	0.0	7.5
Gross Emissions (All Scopes)	***22,590.6***	***100***	***24,825.5***
Purchased Carbon Offsets[(c)]			
Air Travel Offsets	***(200)***	N/A	(150.0)
Solid Waste Offsets	***(100)***	N/A	N/A
Renewable Energy Certificates[(d)]	***(938.4)***	N/A	(798.6)
Total Reduction	***(1,238.4)***	***(5.6)***	***(948.6)***
NET EMISSIONS[(d)]	***21,352.2***	***N/A***	***23,876.9***

Notes:

(a) Air, rail, and rental car travel data provided by EA's corporate travel agent, Safe Harbors.

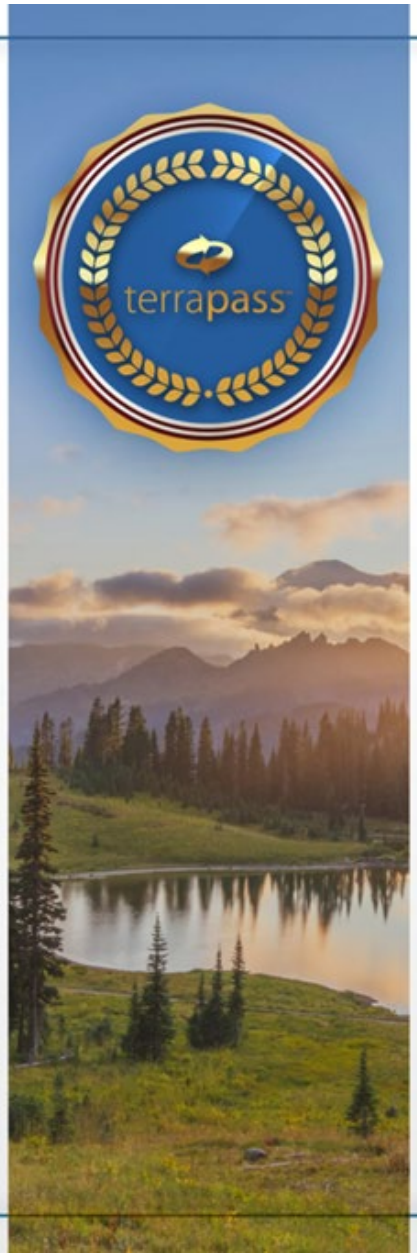
(b) Previously captured as part of Transportation and Distribution (Scope 3, Category 4)

(c) Offsets result in a decrease in net emissions and are denoted by parentheses. Net emissions represent the sum of EA's Scope 1, 2, and 3 emissions less earned and purchased offsets.

(d) 1 REC = 1 MWh = 1,000 kWh. EA used approximately 1,729.9 MWh of purchased electricity in 2023, equivalent to an aggregate Scope 2: Indirect Purchased Energy Emissions total of 580.9 $MTCO_2e$ and an additional 10.3 $MTCO_2e$ of steam. Conversion calculations (MWh to $MTCO_2e$) based on EPA's Emissions Factors Hub (March 2023) as provided within the SGEC Tool. EA purchases RECs in advance of calculating the company's carbon footprint for the year by estimating RECs needed based on the previous year's data. Based on 2022 electrical energy use (2,130.1 MWh), EA purchased 2,500 MWh (2,500,000 kWh) of RECs in 2023, resulting in carbon offsets for 938.4 $MTCO_2e$—offsetting more than 1.5 times (158.7 percent) EA's 2023 Scope 2 emissions.

Appendix A

Copies of 2023 Renewable Energy Certificates and Carbon Offsets



CERTIFICATE
OF SUSTAINABILITY

PROUDLY PRESENTED TO

EA Engineering, Science, and Technology, Inc., PBC

200 mT OF CARBON OFFSETS FROM THE BUSINESS CARBON OFFSET PACKAGE

powered by terrapass™

SQUV0TUC-tpus-760396	04/12/2023
CERTIFICATE NUMBER	DATE

This certifies that:

EA Engineering, Science, and Technology, Inc

agreed to cover:

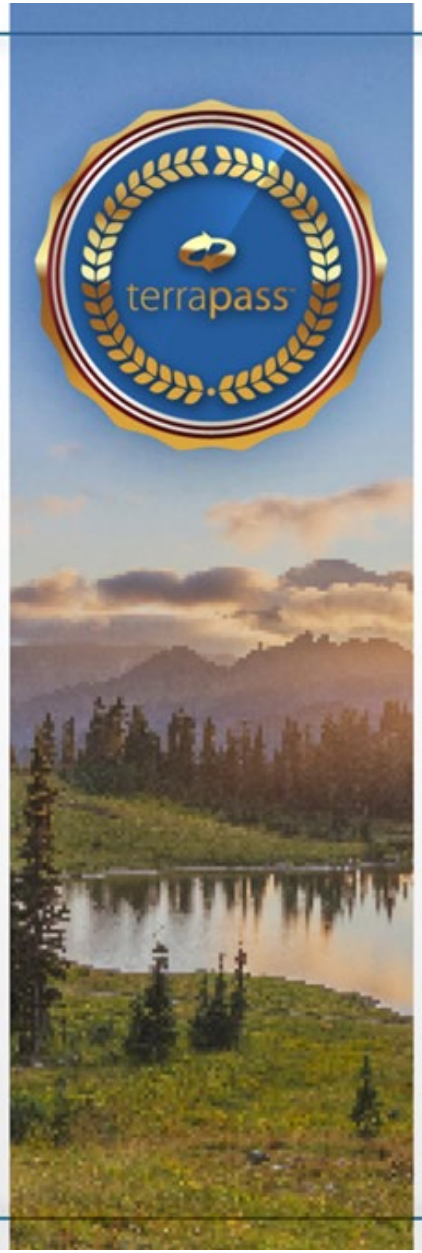
2,500 MWh

of traditional electricity consumption with renewable sources in the form of CSG CleanBuild™Wind Renewable Energy Certificates (RECs). This certificate covers 100% of 1-year Electricity Use.

Green-e

carbon SOLUTIONS GROUP™
DRIVING DECARBONIZATION

Your purchase of renewable certificates is supporting renewable electricity production. You will continue to receive a separate electricity bill from your utility. For every unit of renewable electricity generated, an equivalent amount of renewable certificates are produced. **This purchase builds a market for renewable electricity, but does not directly offset carbon dioxide emissions.**



CERTIFICATE
OF SUSTAINABILITY

PROUDLY PRESENTED TO

EA Engineering, Science, and Technology, Inc., PBC

100MT OF GREEN-E® CLIMATE CERTIFIED CARBON OFFSETS

Climate CERTIFIED

powered by terrapass

YUGFS66Y-tpus-957120
CERTIFICATE NUMBER

11/30/2023
DATE

Appendix B

Center for Corporate Climate Leadership
Simplified Greenhouse Gas Emissions Calculator – Emissions Summary

Back to Intro

EPA CENTER FOR CORPORATE CLIMATE LEADERSHIP
U.S. Environmental Protection Agency

Emissions Summary

Guidance

The total GHG emissions from each source category are provided below. You may also use this summary sheet to fill out the *Annual GHG Inventory Summary and Goal Tracking Form* (.xls) as this calculator only quantifies one year of emissions at a time.

https://www.epa.gov/climateleadership/target-setting

By entering the data below into the appropriate cell of the *Annual GHG Inventory Summary and Goal Tracking Form*, you will be able to compare multiple years of data.

If you have multiple Calculator files covering sub-sets of your inventory for a particular reporting period, sum each of the emission categories (e.g. Stationary Combustion) to an organizational total, which then can be entered into the *Annual GHG Inventory Summary and Goal Tracking Form*.

(A) Enter organization information into the orange cells. Other cells on this sheet will be automatically calculated from the data entered in the sheets in this workbook. Blue cells indicate required emission sources if applicable. Green cells indicate scope 3 emission sources and offsets, which organizations may optionally include in its inventory.

(B) The "Go To Sheet" buttons can be used to navigate to the data entry sheets.

Organizational Information:

Organization Name:	EA Engineering, Science, and Technology, Inc., PBC
Organization Address:	225 Schilling Circle, Suite 400 Hunt Valley, 21031
Inventory Reporting Period:	*Calendar Year 2023* Start: *1/1/2023* End: *12/31/2023*
Name of Preparer:	EA Carbon Footprint Work Group (Lead: John Kumm, PE, BCEE, CC-P)
Phone Number of Preparer:	410-584-7000
Date Prepared:	July 2024

Summary of Organization's Emissions:

	Scope 1 Emissions		
Go To Sheet	Stationary Combustion	174.7	CO_2-e (metric tons)
Go To Sheet	Mobile Sources	735.8	CO_2-e (metric tons)
Go To Sheet	Refrigeration / AC Equipment Use	58.3	CO_2-e (metric tons)
Go To Sheet	Fire Suppression	0.0	CO_2-e (metric tons)
Go To Sheet	Purchased Gases	0.0	CO_2-e (metric tons)
	Location-Based Scope 2 Emissions		
Go To Sheet	Purchased and Consumed Electricity	580.9	CO_2-e (metric tons)
Go To Sheet	Purchased and Consumed Steam	10.3	CO_2-e (metric tons)
Go To Sheet			
	Total organization Emissions		
	Total Scope 1 & Location-Based Scope 2	1,559.9	CO_2-e (metric tons)
	Reductions		
Go To Sheet	Offsets (Renewable Energy Certificates for Scope 2 only)	-938.4	CO_2-e (metric tons)
	Net Scope 1 and 2 Location-Based Emissions	621.5	CO_2-e (metric tons)

Scope 3 Emissions

Go To Sheet	Employee Business Travel	1,027.3	CO_2-e (metric tons)
Go To Sheet	Employee Commuting	702.6	CO_2-e (metric tons)
	Employee Commuting - Home Office Emissions	170.2	CO_2-e (metric tons)
	Downstream Transportation and Distribution (Shipping)	302.8	CO_2-e (metric tons)
Go To Sheet	Upstream Transportation and Distribution	0.6	CO_2-e (metric tons)
	Upstream Leased Assets	117.3	CO_2-e (metric tons)
Go To Sheet	Waste	3.7	CO_2-e (metric tons)
	Potable Water	3.7	CO_2-e (metric tons)
	Wastewater Treatment	6.4	CO_2-e (metric tons)
	Fuel & Energy Related Activities (Upstream Fuel Production)	3,643.0	CO_2-e (metric tons)
	End-of-Life Treatment of Sold Products (Paper Products)	1.1	CO_2-e (metric tons)
	Purchased Goods and Services	14,903.7	CO_2-e (metric tons)
	Capital Goods	148.2	CO_2-e (metric tons)

Required Supplemental Information

Go To Sheet	Biomass CO_2 Emissions from Stationary Sources	0.0	CO_2-e (metric tons)
Go To Sheet	Biomass CO_2 Emissions from Mobile Sources	0.0	CO_2-e (metric tons)

Additional Purchased Carbon Offets

Air Travel Offsets	-200.0	CO_2-e (metric tons)
Solid Waste Offsets	-100.0	CO_2-e (metric tons)