

MAZZETTI



Children's Health

FY24

GREENHOUSE GAS INVENTORY

Stanford Children's

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EXECUTIVE SUMMARY

This Greenhouse Gas (GHG) Inventory Report for Stanford Medicine Children's Health (Stanford Children's) was developed by Mazzetti in alignment with the GHG Protocol Corporate Accounting and Reporting Standard. The report provides a comprehensive assessment of Stanford Children's carbon footprint for Fiscal Year (FY) 2024 and identifies key opportunities for emissions reduction.

The report was developed with the following considerations:

- **Reporting Framework:** Developed in accordance with the GHG Protocol Corporate Accounting and Reporting Standard.
- **Boundary Definition:** Emissions were calculated using the operational control approach, encompassing 41 owned and leased facilities.
- **Scope Coverage:** Includes Scope 1 (direct emissions), Scope 2 (indirect emissions from purchased energy), and Scope 3 (indirect emissions from upstream and downstream activities).
- **Emissions Allocation:** Purchased Goods and Services, Capital Goods, Business Travel, and Fleet Vehicle emissions were measured at the enterprise level and attributed to the 725 Welch Road facility.
- **GHGs Included:** Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), isoflurane, and sevoflurane.
- **Measurement Units:** All emissions are reported in metric tons of carbon dioxide equivalent (MT CO₂e).
- **Reporting Period:** September 1, 2023 – August 31, 2024.

KEY TRENDS AND FINDINGS

In FY24, Stanford Children's as an entity generated 126,008 MT CO₂e across Scopes 1, 2, and 3. The distribution of emissions across the three Scopes is as follows:

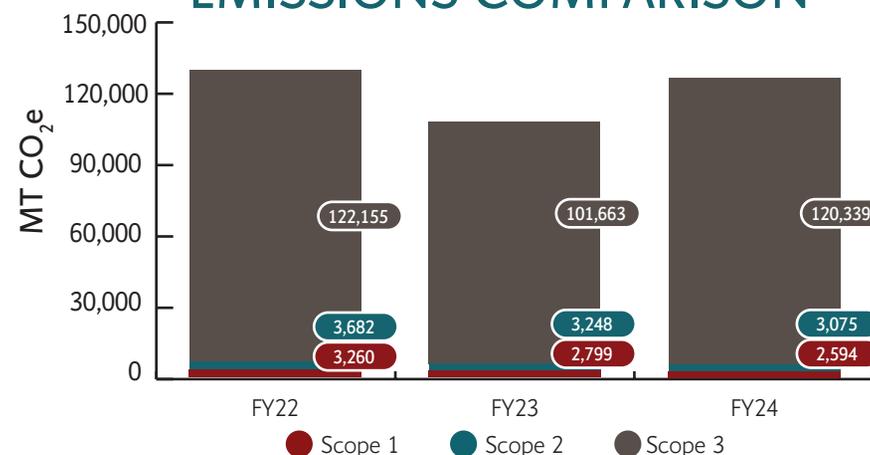
- **Scope 1 emissions** totaled 2,594 MT CO₂e, a 7% decline from FY23 levels. The decline is primarily due to the reduction in the use of natural gas, generator fuel, medical gas, and refrigerants.
- **Scope 2 emissions** totaled 3,075 MT CO₂e, a 5% decrease compared to FY23. This outcome reflects the reduction in the use of steam and the ongoing benefits of Stanford Central Energy Facility (CEF) renewable electricity procurement.
- **Scope 3 emissions** amounted to 120,339 MT CO₂e, a 18% increase compared to FY23. The largest contributors were Purchased Goods & Services and Capital Goods, consistent with prior years. Emissions from Patient Transport were notably reduced compared to FY23.
- **725 Welch Road FY24 Scope 1 and 2 emissions** reduced by 37% compared to the CY2019 baseline year, and by 11% compared to FY23.

CY2019 -FY24 FY23 Scope 3 emissions have been revised to account for inflation-based adjustment, which impacts explicitly three spend-based emissions categories: 3.1 Purchased Goods and Services, 3.2 Capital Goods, and 3.6 Business Travel.

STANFORD CHILDREN'S ENTERPRISE-WIDE EMISSIONS SUMMARY (MT CO₂e)

Annual Emissions per Scope	FY22	FY23	FY24	FY23 % Change over FY22	FY24 % Change over FY23	FY24 % Change over FY22
SCOPE 1	3,260	2,799	2,594	-14%	-7%	-20%
SCOPE 2	3,682	3,248	3,075	-12%	-5%	-16%
SCOPE 3	122,155	101,663	120,339	-17%	18%	-1%
Total	129,097	107,710	126,008	-17%	17%	-2%

FY22 - FY24 EMISSIONS COMPARISON



725 WELCH ROAD EMISSIONS SUMMARY CY2019 - FY24 (MT CO₂e)

Annual Emissions per Scope	Baseline Year CY2019	CY2020	CY2021	FY22	FY23	FY24	FY24 % Change over Baseline Year
SCOPE 1	2,498	1,142	1,280	1,306	1,374	1,092	-56%
SCOPE 2	3,875	3,738	3,877	3,428	3,156	2,946	-24%
<i>Scope 1 & 2 Total</i>	<i>6,373</i>	<i>4,880</i>	<i>5,157</i>	<i>4,734</i>	<i>4,530</i>	<i>4,038</i>	<i>-37%</i>
SCOPE 3	133,412	119,191	123,937	104,180	91,381	109,617	-18%
Scope 1, 2, & 3 Total	139,785	124,071	129,094	108,914	95,911	113,655	-19%

METHODOLOGY

This inventory was prepared for Stanford Children's in accordance with the GHG Protocol Corporate Accounting and Reporting Standard. It includes:

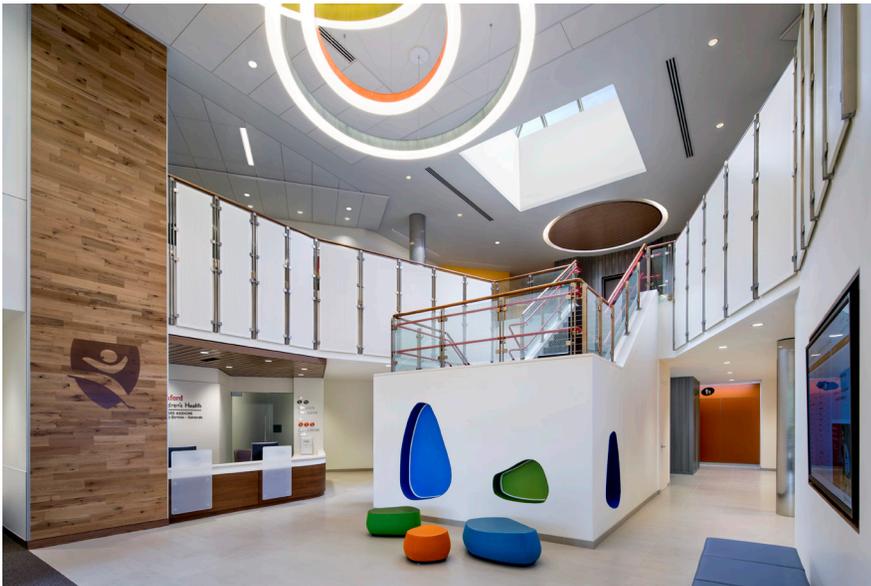
- **Scope 1:** Direct emissions from owned or controlled sources such as natural gas boilers, mobile sources such as fleet vehicles, and unintentional fugitive emissions like refrigerant loss and anesthetic gas use.
- **Scope 2:** Indirect emissions from the generation of purchased energy, such as electricity, chilled water, and hot water.
- **Scope 3:** All other indirect emissions that occur upstream and downstream in the value chain for the portion of Stanford Children's operations included in the boundary of this inventory.



BOUNDARY OF INVENTORY

The inventory boundary includes 41 facilities, comprising a General Acute Care Hospital, Medical Office Buildings (MOB), Offices, Apartments, and inpatient care satellite units in partner hospitals.

Most of the emission source data was provided by individual locations. Fleet Vehicles, Business Travel, Purchased Goods and Services, and Capital Goods were provided in aggregate at the entity-wide level and are included in 725 Welch Road emissions.



INDEX	ADDRESS	FACILITY TYPE	OWNERSHIP TYPE*	CITY	STATE	OCCUPIED AREA SQUARE FEET
1	350 Park Dr.	Apartments	Upstream Leased Assets	Menlo Park	CA	2,550
2	1371 E. Foxhill Dr.	Apartments	Upstream Leased Assets	Fresno	CA	4,050
3	725 Welch Rd.	Hospital	Owned	Palo Alto	CA	1,068,600
4	2500 Grant Rd.	Hospital	Upstream Leased Assets	Mountain View	CA	28,003
5	170 Alameda de las Pulgas	Hospital	Upstream Leased Assets	Redwood City	CA	3,050
6	730 Welch Rd. & 732 Welch Rd.	Medical Office Building	Operated Leased Assets	Palo Alto	CA	32,902
7	1195 West Fremont Ave.	Medical Office Building	Operated Leased Assets	Sunnyvale	CA	80,000
8	1290 59th St.	Medical Office Building	Upstream Leased Assets	Emeryville	CA	6,280
9	2147 Mowry Ave.	Medical Office Building	Upstream Leased Assets	Fremont	CA	1,516
10	14601 S. Bascom Ave.	Medical Office Building	Operated Leased Assets	Los Gatos	CA	24,274
11	14651 S. Bascom Ave.	Medical Office Building	Operated Leased Assets	Los Gatos	CA	35,953
12	321 Middlefield Rd.	Medical Office Building	Upstream Leased Assets	Menlo Park	CA	15,211
13	200 E. Granger Avenue	Medical Office Building	Upstream Leased Assets	Modesto	CA	4,310
14	1174 Castro St.	Medical Office Building	Upstream Leased Assets	Mountain View	CA	4,177
15	2495 Hospital Dr.	Medical Office Building	Upstream Leased Assets	Mountain View	CA	3,765
16	2490 Hospital Dr.	Medical Office Building	Upstream Leased Assets	Mountain View	CA	3,765
17	401 Quarry Rd.	Medical Office Building	Upstream Leased Assets	Palo Alto	CA	4,792
18	750 Welch Rd.	Medical Office Building	Operated Leased Assets	Palo Alto	CA	29,998
19	770 Welch Rd.	Medical Office Building	Operated Leased Assets	Palo Alto	CA	37,726
20	2452 Watson Ct.	Medical Office Building	Upstream Leased Assets	Palo Alto	CA	7,300
21	5000 Pleasanton Ave.	Medical Office Building	Upstream Leased Assets	Pleasanton	CA	5,627
22	2900 Whipple Ave.	Medical Office Building	Upstream Leased Assets	Redwood City	CA	1,737
23	212 San Jose St.	Medical Office Building	Upstream Leased Assets	Salinas	CA	2,397
24	1100 Van Ness Ave.	Medical Office Building	Upstream Leased Assets	San Francisco	CA	26,622
25	1685 Commercial Way	Medical Office Building	Upstream Leased Assets	Santa Cruz	CA	1,850
26	1720 El Camino Real	Medical Office Building	Upstream Leased Assets	Burlingame	CA	3,484
27	14777 Los Gatos Blvd- Los Gatos	Medical Office Building	Upstream Leased Assets	Los Gatos	CA	4,202
28	3480 Buskirk Ave.	Medical Office Building	Upstream Leased Assets	Pleasant Hill	CA	4,922
29	106 La Casa Via	Medical Office Building	Upstream Leased Assets	Walnut Creek	CA	6,262
30	1601 Ygnacio Valley Road - MOB	Medical Office Building	Upstream Leased Assets	Walnut Creek	CA	1,340
31	2800 L Street	Medical Office Building	Upstream Leased Assets	Sacramento	CA	1,800
32	4600 Bohannon Dr.	Home pharmacy/office	Upstream Leased Assets	Menlo Park	CA	11,157
33	777 Welch Rd.	Office	Owned	Palo Alto	CA	13,203
34	700 Welch Rd.	Office	Operated Leased Assets	Palo Alto	CA	36,742
35	555 Knowles Dr.	Office	Upstream Leased Assets	Los Gatos	CA	2,499
36	4100 Bohannon Dr.	Office	Operated Leased Assets	Menlo Park	CA	47,379
37	4200 Bohannon Dr.	Office	Upstream Leased Assets	Menlo Park	CA	16,965
38	4300 Bohannon Dr.	Office	Upstream Leased Assets	Menlo Park	CA	15,154
39	4700 Bohannon Dr.	Office	Operated Leased Assets	Menlo Park	CA	63,078
40	180 El Camino Real	Office	Upstream Leased Assets	Palo Alto	CA	16,598
41	1601 Ygnacio Valley Road - Office	Office	Upstream Leased Assets	Walnut Creek	CA	1,242
Total Occupied Square Feet						1,682,482

*“Owned” denotes facilities exclusively owned and operated by Stanford Children’s. “Operated Leased Assets” describes facilities leased from a third party, where Stanford Children’s oversees the facility’s operations. This means that Stanford Children’s has the authority to make decisions regarding the facility’s operations, including energy management and activities that generate emissions. “Upstream Leased Assets” are facilities leased within multi-tenant buildings where Stanford Children’s does not have operational control; in these cases, building operations are managed by external, unaffiliated entities.

CONSOLIDATION APPROACH

- Equity Share
- Financial Control
- Operational Control ✓

Defining an organizational boundary is a vital component in corporate GHG accounting, as this determines which elements will be included as part of the carbon footprint and how emissions from each operation are consolidated and reported.

The Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard details three consolidation approach options for defining an organizational boundary, which encourages a consistent approach across the Scope 1, Scope 2, and Scope 3 inventories. The selection of a consolidation approach affects which activities in the company's value chain are categorized as Scope 1 and 2 emissions and indirect Scope 3 emissions. The Operational Control consolidation approach was used for this inventory. The consolidation approach used in this inventory is consistent with the approach used in previous inventories.

CONSOLIDATION APPROACH	DESCRIPTION
Equity Share	The equity share approach reflects economic interest, which is the extent of a company's rights to the risks and rewards flowing from an operation. Typically, the share of economic risks and rewards in an operation is aligned with the company's percentage ownership of that operation, and the equity share will typically be the same as the ownership percentage. Under the equity share approach, a company accounts for GHG emissions from operations according to its share of equity in the operation.
Financial Control	Financial Control is defined as the ability to direct an operation's financial and operating policies to gain economic benefits. A company is considered to financially control an operation if it retains the majority of risks and rewards of ownership of the operation's assets.
Operational Control	Operational Control is defined as the authority to introduce and implement operating policies. Based on this definition, it was determined that Stanford Children's has operational Control over its facilities. Under the operational control approach, a complete inventory accounts for 100% of emissions from operations under the organization's Control, including owned and leased assets. As a result, this constitutes a partial inventory due to the exclusion of applicable emission sources such as the Use of Sold Products (metered dose inhalers), End-of-Life Treatment of Sold Products, and Investments.

REPORTING PERIOD COVERED

This inventory was created using Stanford Children's fiscal year (FY) 2024 data (September 1, 2023 – August 31, 2024).

EMISSIONS SOURCES

This inventory includes Scope 1 emissions sources such as Natural Gas, Fleet Vehicles, Generator Fuel, Medical Gas, and Refrigerants.

Scope 2 emissions sources included in this inventory are Purchased Electricity, Steam, Central Energy Facility: Electricity for Heating and Cooling, and Central Energy Facility: Natural Gas for Heating.

Scope 3 emissions sources included in this inventory are Capital goods, Purchased Goods and Services, Fuel and Energy-Related Activities, Employee Commute, Business Travel, Solid Waste, Wastewater, Upstream Leased Assets, Patient Transport, and Helicopter Fuel.

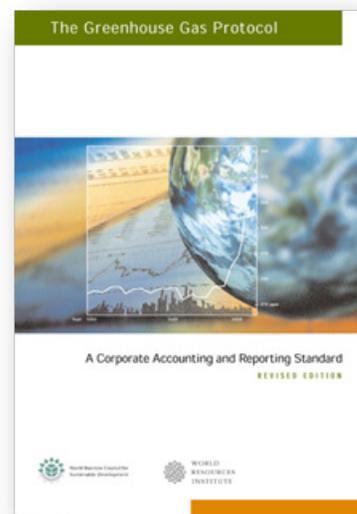
DATA EXCLUSIONS

The following table identifies emission sources that are excluded from this inventory.

Excluded Sources	Scope 3 Emissions Sources	Excluded Sources	Scope 3 Emissions Sources
	Purchased Goods and Services		Downstream Transportation and Distribution
	Capital Goods	X	Processing of Sold Product
	Fuel and Energy Related Activities	X	Use of Sold Product
X	Upstream Transportation and Distribution	X	End-of-Life Treatment of Sold Product
	Waste Generated in Operations	X	Downstream Leased Assets
	Business Travel	X	Franchises
	Employee Commuting	X	Investments
	Upstream Leased Assets		

STANDARD APPLIED

This GHG inventory was compiled following the revised edition of the GHG Protocol Corporate Accounting and Reporting Standard and the Corporate Value Chain (Scope 3) Standard published by the World Resources Institute.



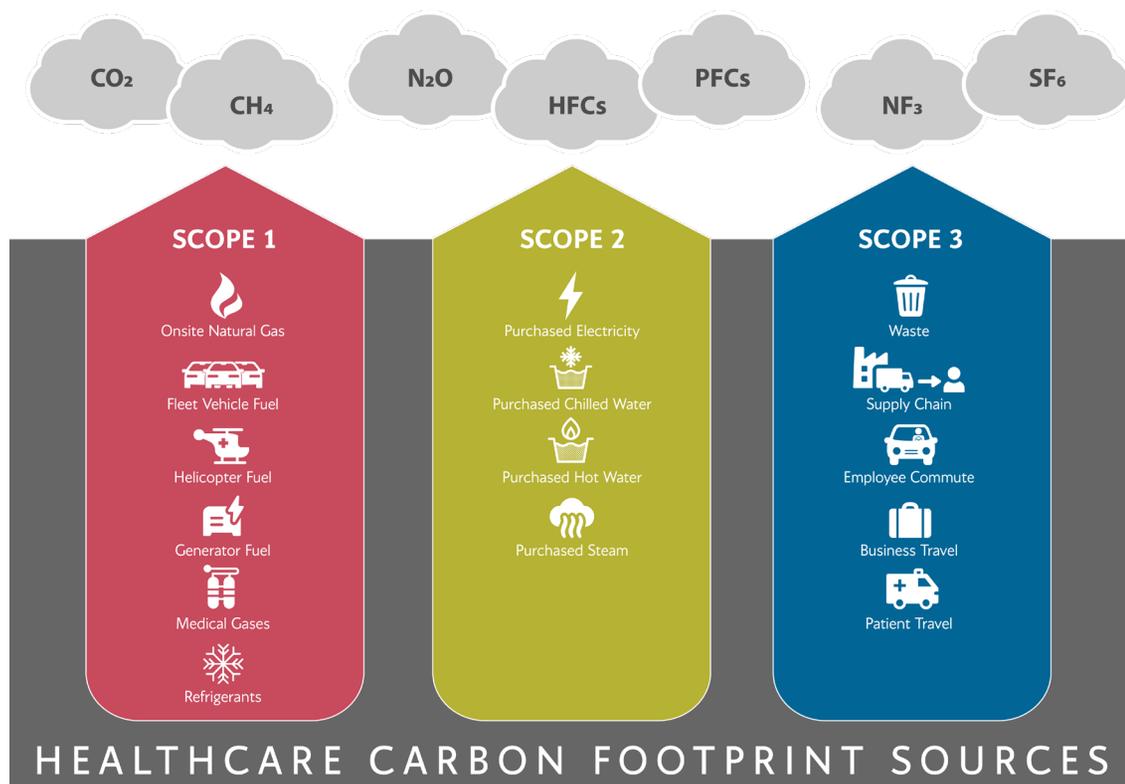
DATA COLLECTED:

The following data types were collected and analyzed to complete this inventory:

DATA TYPE	DATA COLLECTED
Facility Demography	Facility type, location, and size.
Energy	Name of the electricity and natural gas providers for each building, annual utility bills for each building, and power content label information.
Chilled and Heating Water	Stanford University Central Energy Facility data for Chilled and Hot Water (specific to 725 Welch Road buildings).
Steam	Steam is purchased from SHC, and the usage data is collected and used to determine the steam allocation to 725 Welch Road buildings and to determine the allocation of the steam plant diesel generator.
Fleet Vehicles	Fuel usage records (annual) for all owned and leased vehicles. Data for each location is incorporated into the 725 Welch Road data.
Helicopter Fuel	Flight hours and fuel burn rate (specific to the 725 Welch Road facility).
Diesel Generators	Generator runtime data, Bay Area Air Quality Management District (BAAQMD) consumption report, and billing invoices.
Anesthetic gases	Anesthetic gas purchase records (annual) and recovery records by facility.
Refrigerants	Refrigerant recharge logs by facility.
Patient Travel	Anonymized Patient in-person encounter data with zip codes by facility.
Employee Travel	Annual transportation survey results were used for the 725 Welch Road facility. For the remaining facilities, employee home and work zip codes were used to estimate commuting distances.
Waste	Waste volumes by facility type, treatment method, hauling distance, and frequency.
Wastewater	Wastewater volume, municipal utility greenhouse gas report, and California Energy Commission (CEC) energy consumption estimates for wastewater treatment.
Business Travel	Dollars spent on various transportation modes. Data for each location is incorporated into the 725 Welch Road data.
Capital Goods	General ledger reporting for capital procurement expenses. Data for each location is incorporated into the 725 Welch Road data.
Purchased Goods and Services	General ledger reporting for non-personnel expenses. Data for each location is incorporated into the 725 Welch Road data.
Fuel and Energy Related Emissions	Central Energy Facility, utility, and grid report on transmission and distribution losses.

BACKGROUND ON SCOPE 1, 2, & 3 EMISSIONS

Emissions are categorized into three scopes. Scope 1 emissions are direct emissions from stationary sources such as natural gas boilers, mobile sources such as fleet vehicles, and unintentional fugitive emissions like refrigerant loss and anesthetic gas use. Scope 2 is reserved for purchased energy such as electricity or chilled water and hot water supplied from an outside source. Scope 3 sources are indirect emissions that are both upstream and downstream from the reporting entity. Examples of Scope 3 emissions are employee commuting and the disposal of waste products.



GLOBAL WARMING POTENTIAL

Global Warming Potential (GWP) values from the Intergovernmental Panel on Climate Change (IPCC) sixth assessment report (AR6) are used when calculating metric tons of carbon dioxide equivalent (MT CO₂e).

GREENHOUSE GAS	GWP
CO ₂	1
CH ₄	29.8
N ₂ O	273
HFC's	1,300-4,000
Desflurane	2540
Isoflurane	510
Sevoflurane	130

*GWP Sources: [1](#) & [2](#)

EMISSIONS CALCULATION METHODOLOGY

SCOPE 1

Scope 1 Emission Sources	Description of the types, sources, and quality of data used to calculate emissions	Description of the methodologies, allocation methods, and assumptions used to calculate emissions
 <p>On-site Natural Gas</p>	<p>The natural gas data utilized in this inventory was obtained from various sources, including Key Green Solutions, direct vendor reports, and estimations based on available information.</p> <p>The appendix includes a table listing sites where estimated data was used in emission calculations.</p>	<p>Natural gas emissions factors came from the EPA GHG Emission Factors Hub.</p> <p>CPAU supplies its customers with 100% carbon-neutral natural gas, allowing them to claim zero CO₂e emissions for all their usage. To achieve this, CPAU purchases carbon offsets to offset the emissions associated with natural gas usage in Palo Alto. However, Stanford Children's treats the natural gas emissions as if no offsets are in place to focus on emissions reduction efforts. The methodology to account for Natural Gas emissions for facilities that purchase carbon-neutral natural gas from CPAU is consistent with the GHG Protocol Methodology. The Protocol only recognizes upstream instruments like RECs, not offsets.</p>
 <p>Fleet Vehicles</p>	<p>Fleet data used in this inventory was sourced from Stanford Children's Fuel Transaction Data and includes the fleet vehicles owned and leased by Stanford Children's.</p> <p>The data collected for Stanford Children's consists of the fuel usage data for gasoline and diesel vehicles.</p> <p>Note that Fleet Vehicle data was provided entity-wide, and the data for the 40 additional facilities is included in the 725 Welch Road data.</p>	<p>The emission factors for calculating the emissions of Passenger Cars, Light-Duty Trucks, and Medium- and Heavy-Duty Trucks were obtained from the EPA GHG Emission Factors Hub.</p>
 <p>Generator Fuel</p>	<p>Diesel fuel data was derived from generator runtime logs, the Bay Area Air Quality Management District (BAAQD) consumption report, and billing invoices.. For shared SHC/ Stanford Children's generators (12KV and Steam Plant), a 70/30% split percentage was applied to the diesel fuel used.</p> <p>Diesel fuel data for 2500 Grant Road and 170 Alameda de las Pulgas were estimated using 725 Welch Road FY24 and other historical data. Data for 1195 West Fremont Avenue was provided by the facility.</p>	<p>The diesel fuel emission factors came from the EPA GHG emission factors hub.</p>

Scope 1 Emission Sources	Description of the types, sources, and quality of data used to calculate emissions	Description of the methodologies, allocation methods, and assumptions used to calculate emissions
 <p>Medical Gas</p>	<p>Airgas provided medical nitrous oxide and carbon dioxide consumption data for 725 Welch Road.</p> <p>Desflurane, sevoflurane, and isoflurane data were pulled from Stanford Supply Chain, and only deliveries to 725 Welch Road were included.</p> <p>Data for 1195 West Fremont Avenue was provided by the facility.</p>	<p>Weights per purchased quantity were used to calculate the total weight for nitrous oxide and carbon dioxide.</p> <p>Emission factors for medical nitrous oxide were obtained from the IPCC Climate Change 2021 Report. 100-year Global Warming Potential for sevoflurane and Isoflurane came from IPCC AR6 Supplementary Material.</p> <p>725 Welch Road does employ a WAGD medical gas capture system. It was assumed that out of 95% exhaled medical gas, 90% of it is captured by the WAGD system.</p>
 <p>Refrigerants</p>	<p>The Stanford Children's Engineering and Maintenance team provided refrigerant data for 725 Welch Road.</p> <p>Data for 1195 West Fremont Avenue, 777 Welch Road, 730, and 732 Welch Road was provided by the Silicon Valley Mechanical team.</p> <p>Data for other operated leased assets and upstream leased assets were estimated. To estimate the MT CO₂e from refrigerants for facilities with missing data, Mazzetti analyzed a representative sample of over 1,000 healthcare buildings. This analysis, covering a two-year period, was conducted to derive an average emissions factor specific to the healthcare sector. The buildings included a variety of facility types such as Medical Office Buildings, General Offices, Hospitals, Lodging/Residential facilities, Nursing Facilities, and Ambulatory Surgery Centers.</p> <p>For each year, the total refrigerant-related CO₂e emissions were divided by the total square footage of the assessed buildings.</p> <p>The results from both years were then averaged, yielding an estimated emissions factor of 0.0001048 MT CO₂e per square foot (SF).</p>	<p>The GHG Protocol Approach 2: Lifecycle Stage Approach was used to calculate Stanford Children's emissions.</p> <p>From the equipment owner and operator's standpoint, refrigerants are being used to recharge equipment, and it is assumed that the value of refrigerants being added is equal to that lost through leakage.</p> <p>According to the GHG Protocol, CFCs and HCFCs may be omitted since they are being phased out by the Montreal Protocol. They were omitted from this inventory.</p>

SCOPE 2

Scope 2 Emission Sources	Description of the types, sources, and quality of data used to calculate emissions	Description of the methodologies, allocation methods, and assumptions used to calculate emissions
 Purchased Electricity - Market-Based Emissions	<p>The electricity data utilized in this inventory was obtained from various sources, including Key Green Solutions, direct vendor reports, and estimations based on available information.</p> <p>The appendix includes a table listing sites where estimated data were used in emission calculations.</p>	<p>The utilities provide annual market-based emissions factors. CPAU provides 100% carbon-neutral electricity by matching electricity demand with carbon-free supply on an annual basis. This allows customers to claim zero CO₂e emissions for all their usage.</p>
 Purchased Electricity - Location-Based Emissions	<p>The electricity data utilized in this inventory was obtained from various sources, including Key Green Solutions, direct vendor reports, and estimations based on available information.</p> <p>The appendix includes a table listing sites where estimated data were used in emission calculations.</p>	<p>The annual location-based emissions factors can be found using the EPA's eGrid Explorer tool on their website. The emissions factor is based on the CAMX region for 2022, which was the most current data available.</p>
 CEF: Electricity for Heating and Cooling	<p>725 Welch Road receives both chilled water and heating hot water from Stanford University's Central Energy Facility (CEF). Stanford University provided a breakdown for 725 Welch Road buildings in terms of electricity consumption for chilled water and heating water.</p> <p>It is vital to note that from April 1, 2022, the Central Energy Facility began procuring 100% renewable electricity for its operations, significantly reducing 725 Welch Road Scope 2 emissions.</p>	<p>The Department of Sustainability, Utilities & Infrastructure (SUI) calculated emissions from the CEF plant and provided a breakdown for all 725 Welch Road buildings.</p>
 CEF: Natural Gas for Heating	<p>Stanford University provided a breakdown for 725 Welch Road buildings in terms of natural gas consumption for heating hot water. At 725 Welch Road, the heating hot water produces building heating and domestic hot water.</p>	<p>The Department of Sustainability, Utilities & Infrastructure (SUI) calculated emissions from the CEF plant and provided a breakdown for all 725 Welch Road buildings.</p>
 Steam from Stanford Steam Plant	<p>Energy data for the steam plant and the steam consumption breakdown per building were pulled from Key Green Solutions. Steam is provided to 725 Welch Road (West Campus) from SHC's steam plant located at 901 Quarry. At 725 Welch Road (West Campus), the steam produces heating hot water for building heating, domestic hot water, and direct steam for humidification.</p>	<p>The emissions for the steam plant were calculated using electricity (CPAU) and natural gas (PG&E) supplied to the steam plant. The steam plant serves Stanford Health Care, 725 Welch Road (West Campus), and the School of Medicine. A breakdown percentage based on the steam meters was used to determine the energy and emissions for each facility.</p>

SCOPE 3

Scope 3 Emission Sources	Description of the types, sources, and quality of data used to calculate emissions	Description of the methodologies, allocation methods, and assumptions used to calculate emissions
 <p>Purchased Goods and Services</p>	<p>Expense data for 725 Welch Road was provided by Stanford Children’s Finance Department via general ledger reporting.</p> <p>Note that Purchased Goods and Services data for the 40 additional facilities are included in the 725 Welch Road Data.</p>	<p>Expenses were matched with the categories and emissions factors from the EPA Supply Chain Greenhouse Gas Emissions Factors v1.2 by NAICS-6.</p> <p>The National Consumer Price Index (CPI) values with margins were used to adjust spend-based data for inflation. For the Purchased Goods and Services data, an inflation factor of 1.07—calculated from the CPI values for 2022 and 2024—was applied to convert 2024 dollars into 2022 dollars, aligning with the use of the EPA 2022 emission factors for this category.</p> <p>Expenses such as Medical Waste Processing and Travel expenses were excluded because they are covered in Scope 3.5: Waste Treatment and Scope 3.6 Business Travel.</p>
 <p>Capital Goods</p>	<p>Expense data for 725 Welch Road was provided by Stanford Children’s Finance Department via general ledger reporting.</p> <p>Note that Purchased Goods and Services data for the 40 additional facilities are included in 725 Welch Road Data.</p>	<p>Expenses were matched with the categories and emissions factors from the EPA Supply Chain Greenhouse Gas Emissions Factors v1.2 by NAICS-6.</p> <p>The National Consumer Price Index (CPI) values with margins were used to adjust spend-based data for inflation. For the Capital Goods data, an inflation factor of 1.07—calculated from the CPI values for 2022 and 2024—was applied to convert 2024 dollars into 2022 dollars, aligning with the use of the EPA 2022 emission factors for this category.</p>

Scope 3 Emission Sources	Description of the types, sources, and quality of data used to calculate emissions	Description of the methodologies, allocation methods, and assumptions used to calculate emissions
 <p>Fuel and Energy Related Activities</p>	<p>The energy data utilized in this inventory was obtained from various sources, including Key Green Solutions, direct vendor reports, and estimations based on available information. Stanford Central Energy Facility (CEF) plant provides chilled water and heating hot water for 725 Welch Road. The plant provided thermal distribution losses for chilled and hot water systems, as well as in-plant electricity losses.</p> <p>The appendix includes a table listing sites where estimated data was used in emission calculations.</p>	<p>Upstream Emissions of Purchased Fuels: The emissions associated with the extraction, production, and transportation of natural gas, diesel, and gasoline are reported in Scope 1 emissions using emissions factors from the UK Department for Business, Energy, and Industrial Strategy's 2023 Greenhouse Gas Reporting Conversion Factors. US-based factors are not available via the EPA or other trusted US sources.</p> <p>Upstream Emissions of Purchased Electricity: Directly purchased electricity from CPAU has no extraction, production, or transportation emissions; however, directly purchased electricity from vendors such as PG&E/SVCE and PCE does result in emissions. Emissions were calculated using UK factors for overseas US electricity production.</p> <p>Transmission and Distribution (T&D) Losses: Because directly purchased electricity from CPAU is 100% renewable, there are no resulting T&D loss emissions. However, there are T&D losses for directly purchased non-renewable electricity and other indirectly purchased electricity.</p> <p>Grid losses were calculated at 4.2% per the EPA eGrid Western region grid losses. The CEF reports that 2.3% of electricity is lost in production at CEF and that the thermal loss of hot water is 4% and 6% for chilled water.</p>
 <p>Solid Waste</p>	<p>Waste tonnage data used in this inventory were sourced from vendor reports. For upstream leased assets, emissions were estimated based on the best available information.</p> <p>The appendix includes a table listing sites where estimated data were used in emission calculations.</p>	<p>To calculate emissions from each waste stream, emissions factors were sourced from the EPA GHG emission factors hub.</p>
 <p>Wastewater</p>	<p>Wastewater data included in this inventory were compiled from multiple sources, including Key Green Solutions and vendor reports. It is estimated that wastewater accounts for approximately 95% of total water consumption.</p> <p>The appendix includes a table listing sites where estimated data was used in emission calculations.</p>	<p>The California Energy Commission (CEC) wastewater treatment and disposal estimate was used to calculate wastewater emissions.</p>

Scope 3 Emission Sources	Description of the types, sources, and quality of data used to calculate emissions	Description of the methodologies, allocation methods, and assumptions used to calculate emissions
 <p>Business Travel</p>	<p>Business travel data (personal car and all other modes) for 725 Welch Road was provided by Accounts Payable in the form of total dollars spent. This data also encompasses business travel expenses for 40 additional facilities.</p>	<p>The spend-based method was used to estimate emissions, using secondary EEIO (environmentally extended input-output) factors from the EPA Supply Chain Greenhouse Gas Emissions Factors v1.2 by NAICS-6.</p> <p>The National Consumer Price Index (CPI) values were used to adjust spend-based data for inflation. An inflation factor of 1.07—calculated from the CPI values for 2022 and 2024—was applied to convert 2024 dollars into 2022 dollars, aligning with the use of the EPA 2022 emission factors for this category.</p>
 <p>Employee Commute</p>	<p>Employee commute data for 725 Welch Road was provided by Stanford Health Care and Stanford Parking and Transportation Services, sourced from the Fall 2023 Commuter Survey Extract Spreadsheet.</p> <p>The Stanford Children’s Human Resources Department provided employees’ home and work ZIP codes used for the distance calculation.</p> <p>Where direct employee commute data was unavailable, an estimation methodology was developed based on data from comparable sites.</p>	<p>The Passenger Car (fuel unknown) emission factors were used from the EPA GHG emission factors hub. To calculate this emissions category, an assumption was made that employees who commute less than 100 miles each way are in-person workers. Conversely, employees who commute more than 100 miles to work are assumed to be remote workers. Other assumptions include 48 work weeks per year, 2 trips per day, 2 persons per carpool, and 5 persons per vanpool.</p> <p>The Marguerite shuttle emission factor is zero, as the fleet serving 725 Welch Road is all electric and on CPAU power. Survey responses for “Other” primarily involve the use of personal cars, so the category was calculated using passenger vehicle emissions factors.</p>
 <p>Upstream Leased Assets</p>	<p>Energy, Refrigerant, and Generator Fuel usage for upstream leased assets were estimated using factors such as leased space size and average energy, refrigerant, and generator fuel consumption of similar building types.</p>	<p>Emission factors from the EPA GHG emission factors hub and applicable electricity providers were applied to data from owned and operated leased asset facilities. This data was then used to estimate emissions associated with Stanford Children’s upstream leased assets.</p>
 <p>Patient Transport</p>	<p>IS Analytics & Reporting provided patient travel data. Distances were estimated using the NBER Zip Code Distance Database. There-and-back travel was assumed for each entry.</p>	<p>The distance-based method was used to estimate emissions, using Air Travel (Medium Haul) and Passenger Car (fuel unknown) emission factors from the EPA GHG emission factors hub.</p> <p>As transportation modes were unavailable for in-person visits, trips of 250 miles or less were assumed to be vehicular travel, while distances over 250 miles were assumed to be air travel.</p>

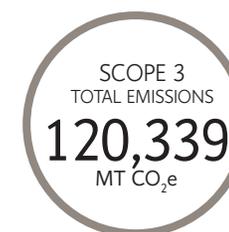
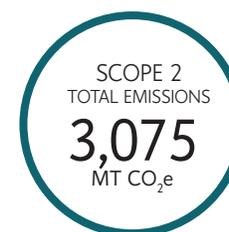
Scope 3 Emission Sources	Description of the types, sources, and quality of data used to calculate emissions	Description of the methodologies, allocation methods, and assumptions used to calculate emissions
 <p>Helicopter Fuel</p>	<p>Stanford Life Flight provided helicopter fuel data for 725 Welch Road. Fuel consumption was estimated using a burn rate of 80 gallons per hour, based on total flight hours. The number of flights associated with 725 Welch Road was approximated by analyzing the volume of PICU, NICU, and OB patient transfers to the facility.</p>	<p>The jet fuel (jet A fuel) emission factors came from the EPA GHG emission factors hub.</p>

FY24 STANFORD CHILDREN'S EMISSIONS SUMMARY

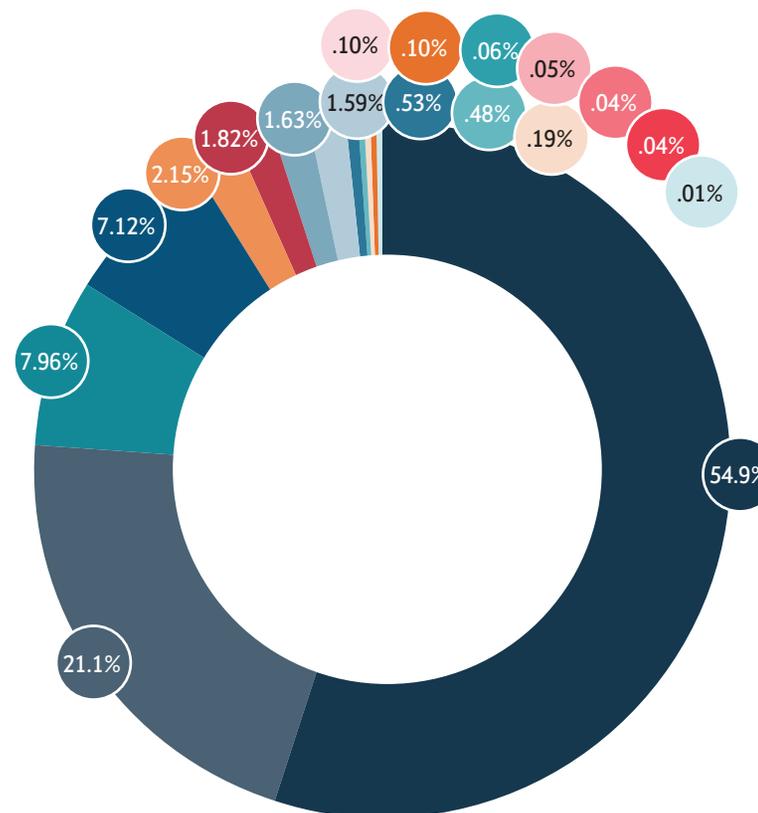
In Fiscal Year 2024 (FY24), Stanford Children's reported total greenhouse gas (GHG) emissions of 126,008 metric tons of carbon dioxide equivalent (MT CO₂e). Emissions by scope are shown to the right.

The distribution of emissions sources is presented in the table below, ranked from the largest to the smallest contributor. This ranking provides a basis for prioritizing mitigation strategies, with emphasis placed on addressing the categories that represent the greatest share of overall emissions.

EMISSIONS CATEGORY	PERCENTAGE OF TOTAL EMISSIONS (SCOPE 1, 2, & 3)
Purchased Goods & Services	54.99%
Capital Goods	21.12%
Employee Commuting	7.96%
Patient Transport	7.12%
Steam	2.15%
Natural Gas	1.82%
Fuel & Energy Related Activities	1.63%
Solid Waste	1.59%
Upstream Leased Assets	0.53%
Business Travel	0.48%
CEF: Natural Gas for Heating	0.19%
Refrigerants	0.10%
Purchased Electricity - Market-Based Emissions	0.10%
Helicopter Fuel	0.06%
Medical Gas	0.05%
Generator Fuel	0.04%
Fleet Vehicles	0.04%
Wastewater Treatment & Transport	0.01%
CEF: Electricity for Heating and Cooling	0.00%



STANFORD CHILDREN'S SCOPE 1, 2, & 3 EMISSIONS PERCENTAGE BREAKDOWN



FY24 SCOPE 1, 2, & 3 EMISSIONS PER FACILITY

INDEX	FACILITY ADDRESS	OWNERSHIP TYPE*	FACILITY TYPE	TOTAL SCOPE 1, 2, & 3 MT CO ₂ e	PERCENTAGE OF TOTAL ORGANIZATIONAL SCOPE 1, 2, & 3 EMISSIONS
1	725 Welch Rd.	Owned	Hospital	113,655	90.20%
2	1195 West Fremont Ave.	Operated Leased Assets	MOB	2,386	1.89%
3	730 Welch Rd. & 732 Welch Rd.	Operated Leased Assets	MOB	2,321	1.84%
4	4700 Bohannon Dr.	Operated Leased Assets	Office	1,051	0.83%
5	770 Welch Rd.	Operated Leased Assets	MOB	937	0.74%
6	4100 Bohannon Dr.	Operated Leased Assets	Office	890	0.71%
7	321 Middlefield Rd.	Upstream Leased Assets	MOB	559	0.44%
8	14601 S. Bascom Ave.	Operated Leased Assets	MOB	481	0.38%
9	2452 Watson Ct.	Upstream Leased Assets	MOB	388	0.31%
10	1100 Van Ness Ave.	Upstream Leased Assets	MOB	349	0.28%
11	14651 S. Bascom Ave.	Operated Leased Assets	MOB	317	0.25%
12	3480 Buskirk Ave.	Upstream Leased Assets	MOB	212	0.17%
13	4200 Bohannon Dr.	Upstream Leased Assets	Office	183	0.15%
14	180 El Camino Real	Upstream Leased Assets	Office	171	0.14%
15	401 Quarry Rd.	Upstream Leased Assets	MOB	161	0.13%
16	106 La Casa Via	Upstream Leased Assets	MOB	144	0.11%
17	5000 Pleasanton Ave.	Upstream Leased Assets	MOB	141	0.11%
18	750 Welch Rd.	Operated Leased Assets	MOB	138	0.11%
19	4300 Bohannon Dr.	Upstream Leased Assets	Office	128	0.10%
20	1290 59th St.	Upstream Leased Assets	MOB	112	0.09%
21	1720 El Camino Real	Upstream Leased Assets	MOB	109	0.09%
22	777 Welch Rd.	Owned	Office	109	0.09%
23	2490 Hospital Dr.	Upstream Leased Assets	MOB	105	0.08%
24	4600 Bohannon Dr.	Upstream Leased Assets	Home pharmacy/office	103	0.08%
25	2500 Grant Rd.	Upstream Leased Assets	Hospital	95	0.08%
26	700 Welch Rd.	Operated Leased Assets	Office	93	0.07%
27	200 E. Granger Avenue	Upstream Leased Assets	MOB	78	0.06%
28	170 Alameda de las Pulgas	Upstream Leased Assets	Hospital	71	0.06%
29	555 Knowles Dr.	Upstream Leased Assets	Office	70	0.06%

FY24 SCOPE 1, 2, & 3 EMISSIONS PER FACILITY

INDEX	FACILITY ADDRESS	OWNERSHIP TYPE*	FACILITY TYPE	TOTAL SCOPE 1, 2, & 3 MT CO ₂ e	PERCENTAGE OF TOTAL ORGANIZATIONAL SCOPE 1, 2, & 3 EMISSIONS
30	14777 Los Gatos Blvd- Los Gatos	Upstream Leased Assets	MOB	67	0.05%
31	1174 Castro St.	Upstream Leased Assets	MOB	64	0.05%
32	212 San Jose St.	Upstream Leased Assets	MOB	60	0.05%
33	2495 Hospital Dr.	Upstream Leased Assets	MOB	51	0.04%
34	1685 Commercial Way	Upstream Leased Assets	MOB	49	0.04%
35	2900 Whipple Ave.	Upstream Leased Assets	MOB	43	0.03%
36	2147 Mowry Ave.	Upstream Leased Assets	MOB	39	0.03%
37	2800 L Street	Upstream Leased Assets	MOB	25	0.02%
38	1601 Ygnacio Valley Road - MOB	Upstream Leased Assets	MOB	22	0.02%
39	1371 E. Foxhill Dr.	Upstream Leased Assets	Apartments	14	0.01%
40	1601 Ygnacio Valley Road - Office	Upstream Leased Assets	Office	10	0.01%
41	350 Park Dr.	Upstream Leased Assets	Apartments	9	0.01%
	TOTAL			126,008	100%

***Owned*” denotes facilities exclusively owned and operated by Stanford Children’s. “Operated Leased Assets” describes facilities leased from a third party, where Stanford Children’s oversees the facility’s operations. This means that Stanford Children’s has the authority to make decisions regarding the facility’s operations, including energy management and activities that generate emissions. “Upstream Leased Assets” are facilities leased within multi-tenant buildings where Stanford Children’s does not have operational control; in these cases, building operations are managed by external, unaffiliated entities.

STANFORD CHILDREN'S FY24 SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e PER SQUARE FEET) COMPARISON BY FACILITY

This section of the report summarizes the Scope 1 and 2 GHG emissions of Stanford Children's owned and leased assets. The emission of each facility is shown on a single page, starting with the facility with the lowest emissions and ending with the facility with the highest emissions.

The top of each one-pager displays the name of the facility (A), and the graphs below each address represent the Scope 1 and 2 emissions for that facility.

The column chart at the top of the one-pager (B) compares the Scope 1 and 2 carbon intensity, sorted from lowest to highest. The highlighted bar denotes the carbon intensity of the facility in comparison to others.

The Sunburst chart (C) directly beneath the Scope 1 and 2 Carbon Intensity Comparison bar displays the breakdown of Scope 1 and 2 emissions as a percentage of the total.

Below the Sunburst chart, the waterfall graph (D) showcases the MT CO₂e of each emission category. The last bar in the waterfall graph represents the total Scope 1 and 2 emissions for that facility.

The right-hand side of the sunburst chart shows data on the campus electricity emissions (E). This includes a comparison between location-based and market-based emissions. The electricity fuel mix information illustrates the proportion of the facility's electricity emissions rate (market-based emissions) relative to the regional power mix (location-based emissions).

The two bubble charts on the right side of the one-pager (F) display the campus/leased asset Scope 1 and 2 total in MT CO₂e.



STANFORD CHILDREN'S FY24 SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e PER SQUARE FEET) COMPARISON BY FACILITY

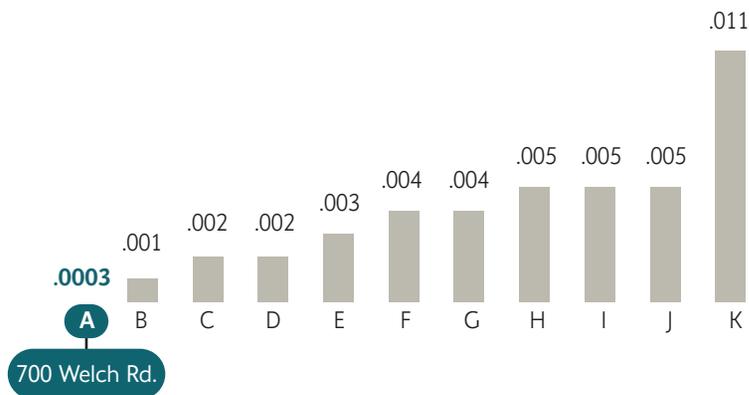
The following pages outline the Scope 1 and 2 emissions for Stanford Children's owned facilities and operated leased assets. Facilities are listed by carbon intensity from lowest to highest.

INDEX	FACILITY ADDRESS	OWNERSHIP TYPE*	FACILITY TYPE
A	700 Welch Rd.	Operated Leased Assets	Office
B	14651 S. Bascom Ave.	Operated Leased Assets	Medical Office Building
C	777 Welch Rd.	Owned	Office
D	750 Welch Rd.	Operated Leased Assets	Medical Office Building
E	770 Welch Rd.	Operated Leased Assets	Medical Office Building
F	725 Welch Rd.	Owned	Hospital
G	14601 S. Bascom Ave.	Operated Leased Assets	Medical Office Building
H	4100 Bohannon Dr.	Operated Leased Assets	Office
I	4700 Bohannon Dr.	Operated Leased Assets	Office
J	1195 West Fremont Ave.	Operated Leased Assets	Medical Office Building
K	730 Welch Rd. & 732 Welch Rd.	Operated Leased Assets	Medical Office Building

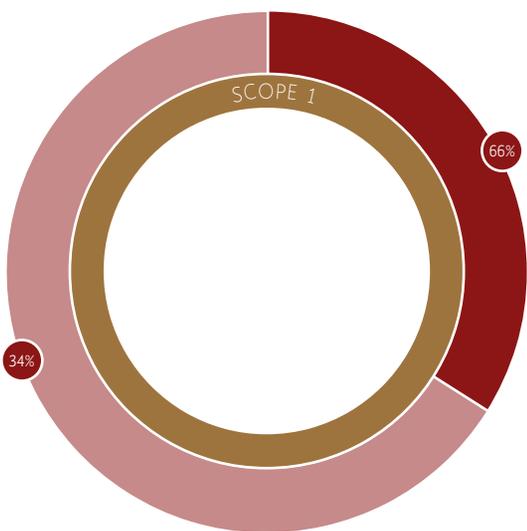
***Owned* denotes facilities exclusively owned and operated by Stanford Children's. *Operated Leased Assets* describes facilities leased from a third party, where Stanford Children's oversees the facility's operations. This means that Stanford Children's has the authority to make decisions regarding the facility's operations, including energy management and activities that generate emissions. *Upstream Leased Assets* are facilities leased within multi-tenant buildings where Stanford Children's does not have operational control; in these cases, building operations are managed by external, unaffiliated entities.

700 Welch Road

Palo Alto, CA (Office)



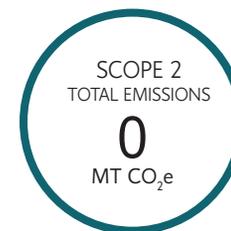
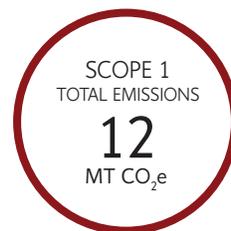
SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON



SCOPE 1 & 2 EMISSIONS BREAKDOWN

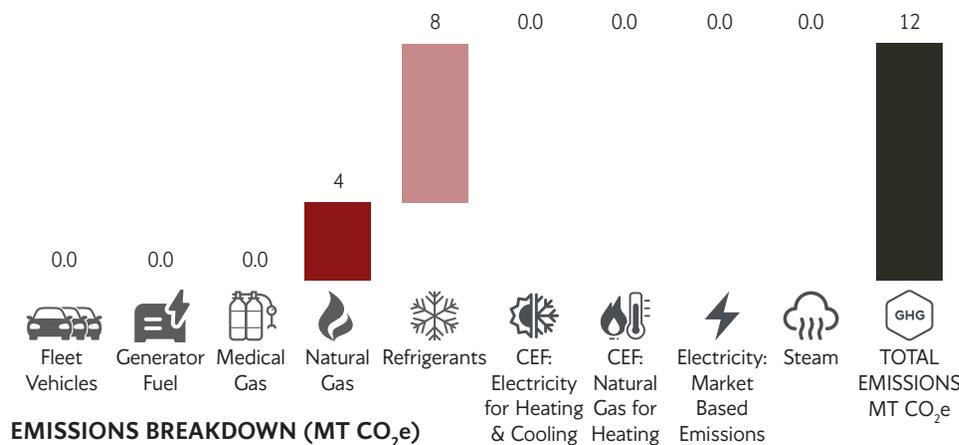
80
MT CO₂e
Location Based Emissions

0.0
MT CO₂e
Market Based Emissions



ELECTRICITY FUEL MIX

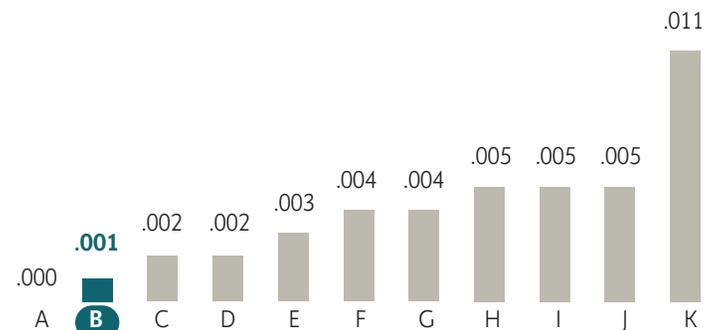
700 Welch Rd. electricity emissions rate is 100% lower than the regional power mix.



EMISSIONS BREAKDOWN (MT CO₂e)

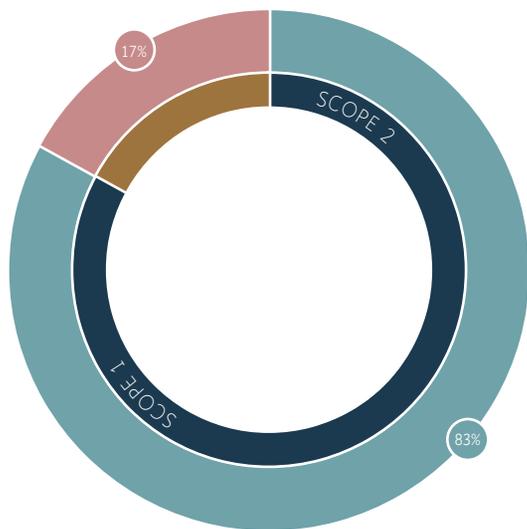
14651 South Bascom Avenue

Los Gatos, CA (MOB)



14651 S. Bascom Ave.

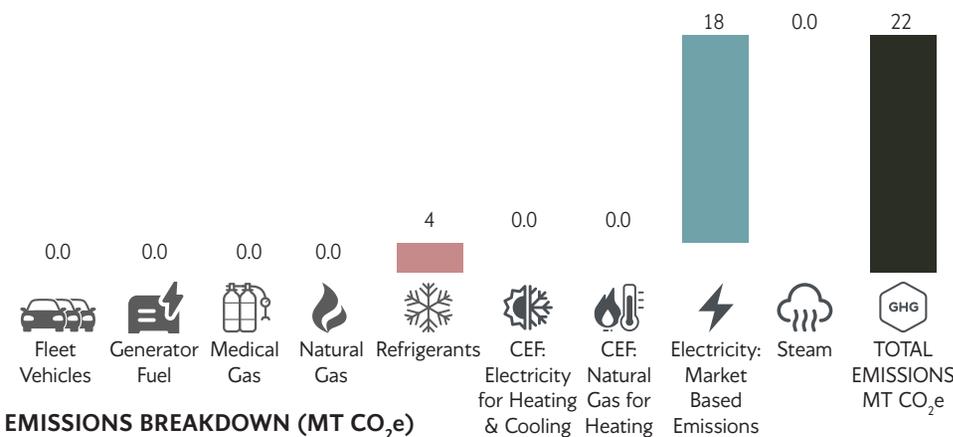
SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON



ELECTRICITY FUEL MIX
14651 S. Bascom Avenue electricity emissions rate is 86% lower than the regional power mix.

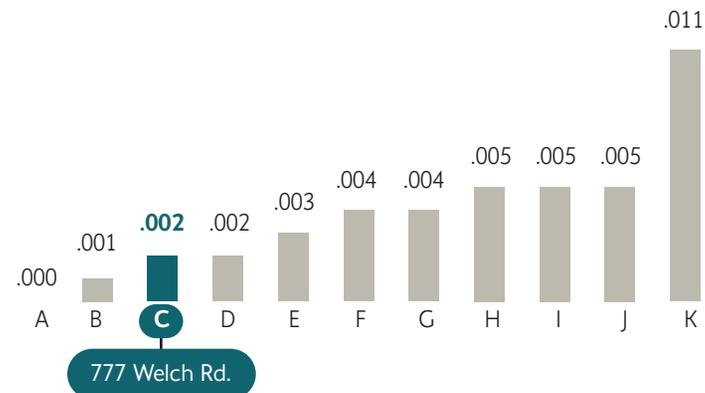


SCOPE 1 & 2 EMISSIONS BREAKDOWN

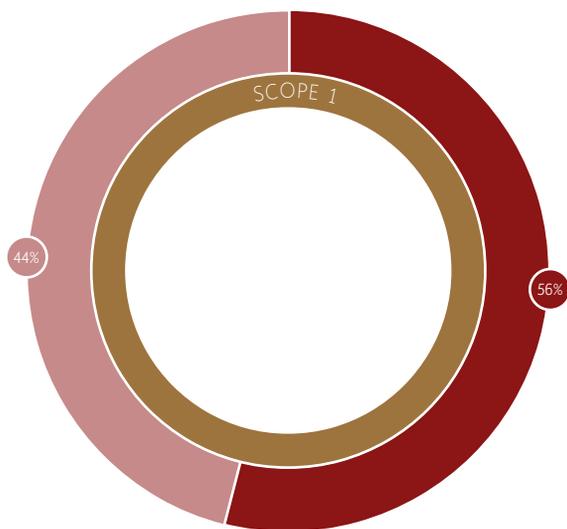


777 Welch Road

Palo Alto, CA (Office)



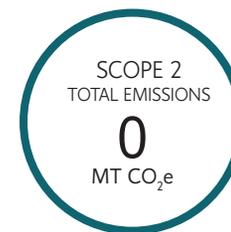
SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON



SCOPE 1 & 2 EMISSIONS BREAKDOWN

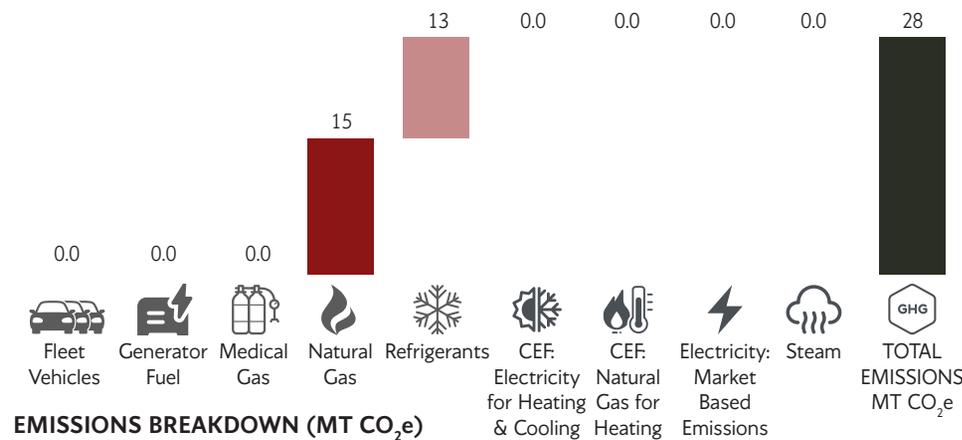
22
MT CO₂e
Location Based Emissions

0.0
MT CO₂e
Market Based Emissions



ELECTRICITY FUEL MIX

777 Welch Rd. electricity emissions rate is 100% lower than the regional power mix.

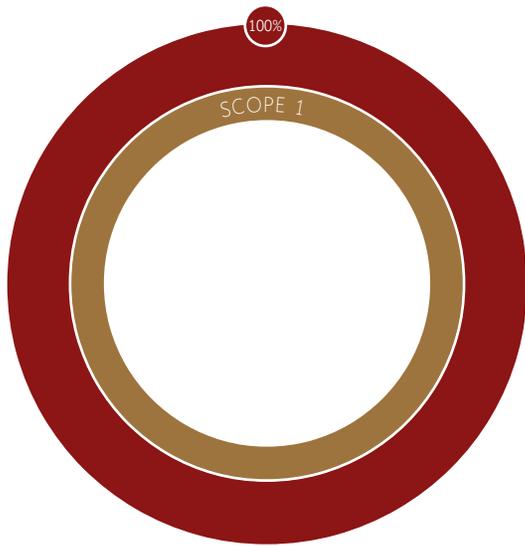


750 Welch Road

Palo Alto, CA (MOB)



SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON



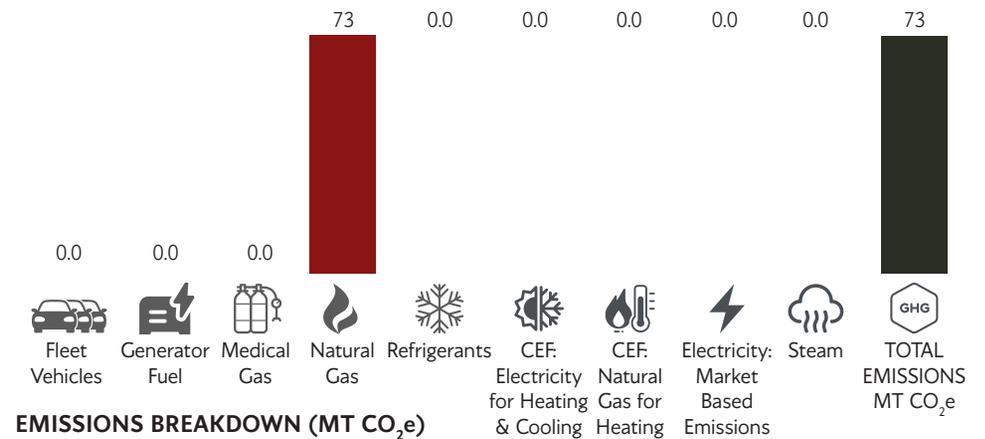
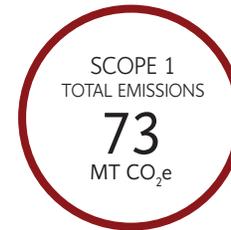
SCOPE 1 & 2 EMISSIONS BREAKDOWN

111
MT CO₂e
Location Based Emissions

0.0
MT CO₂e
Market Based Emissions

ELECTRICITY FUEL MIX

750 Welch Road electricity emissions rate is 100% lower than the regional power mix.

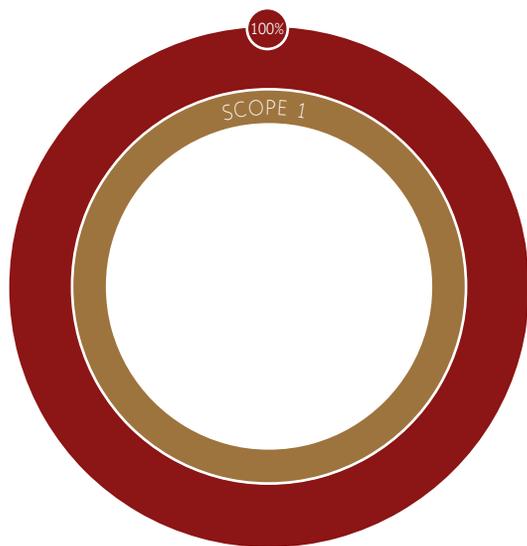


770 Welch Road

Palo Alto, CA (MOB)



SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON

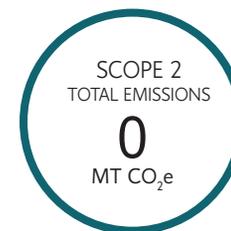


130
MT CO₂e
Location Based Emissions

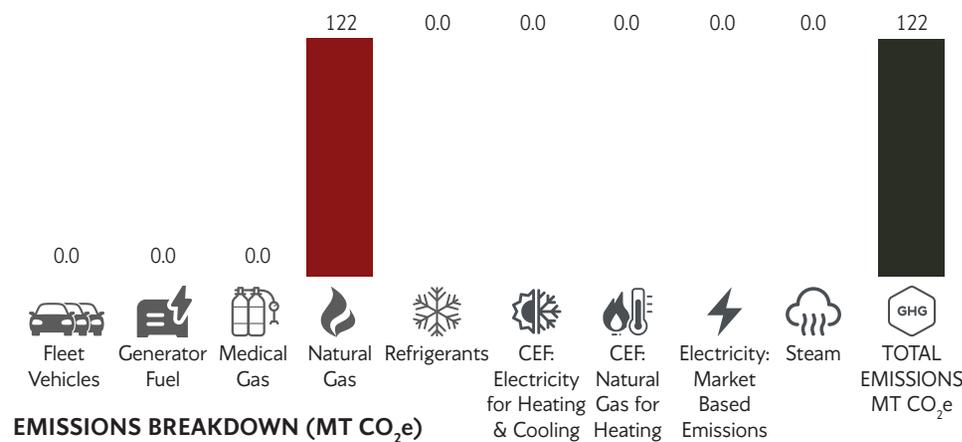
0.0
MT CO₂e
Market Based Emissions

ELECTRICITY FUEL MIX

770 Welch Road electricity emissions rate is 100% lower than the regional power mix.



SCOPE 1 & 2 EMISSIONS BREAKDOWN

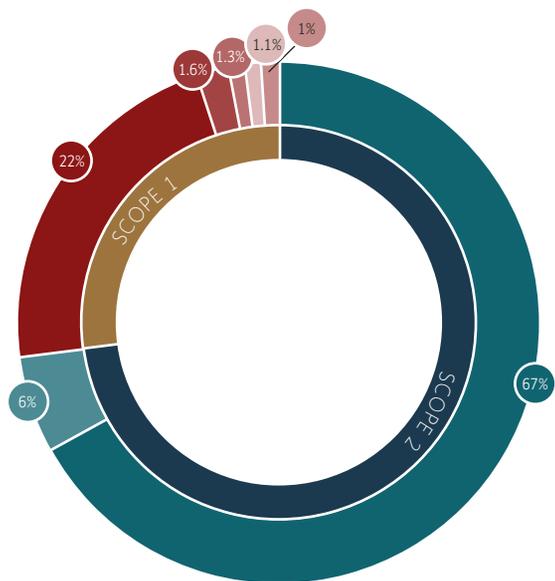


725 Welch Road

Palo Alto, CA (Hospital)



SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON



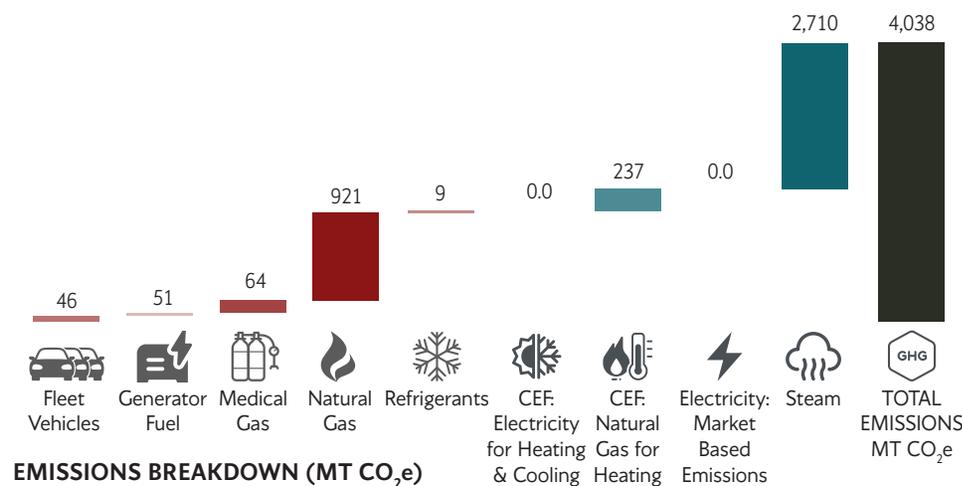
SCOPE 1 & 2 EMISSIONS BREAKDOWN

5,495
MT CO₂e
Location Based Emissions

0
MT CO₂e
Market Based Emissions

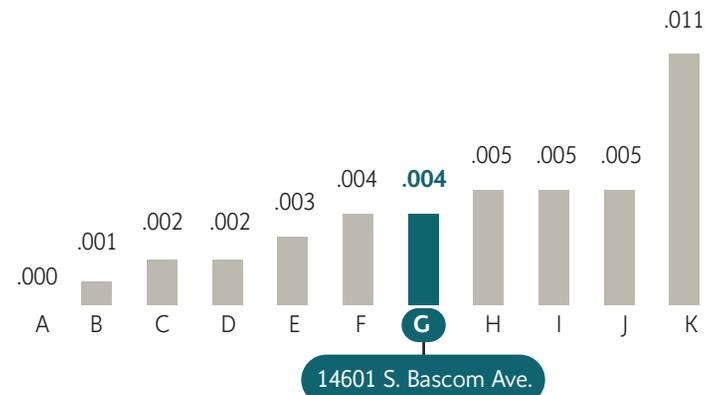
ELECTRICITY FUEL MIX

725 Welch Road electricity emissions rate is 100% lower than the regional power mix.

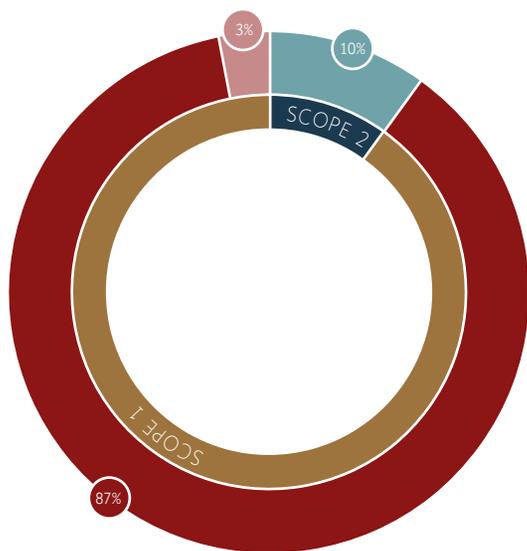


14601 South Bascom Avenue

Los Gatos, CA (MOB)



SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON

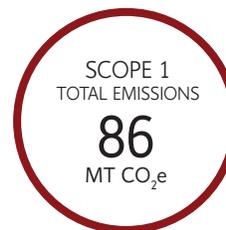


71
MT CO₂e
Location Based Emissions

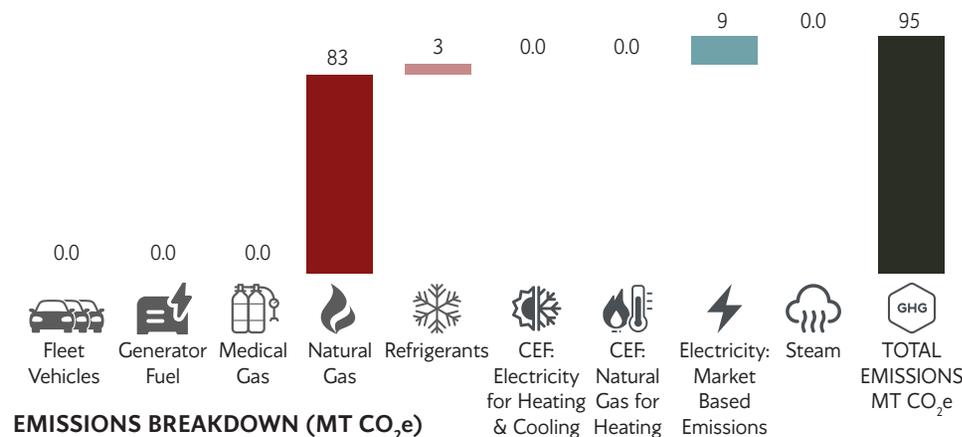
9
MT CO₂e
Market Based Emissions

ELECTRICITY FUEL MIX

14601 S. Bascom Avenue electricity emissions rate is 87% lower than the regional power mix.



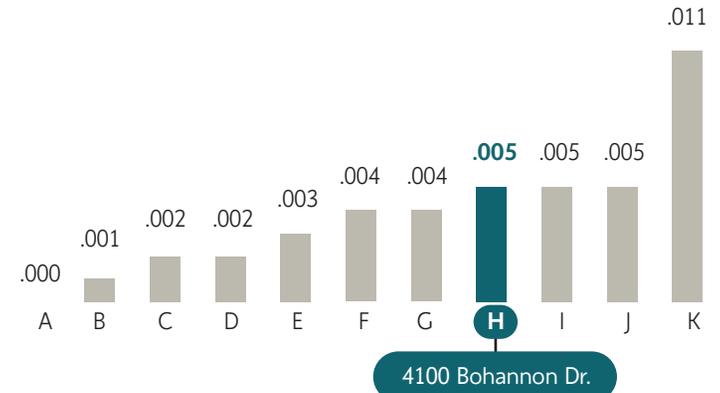
SCOPE 1 & 2 EMISSIONS BREAKDOWN



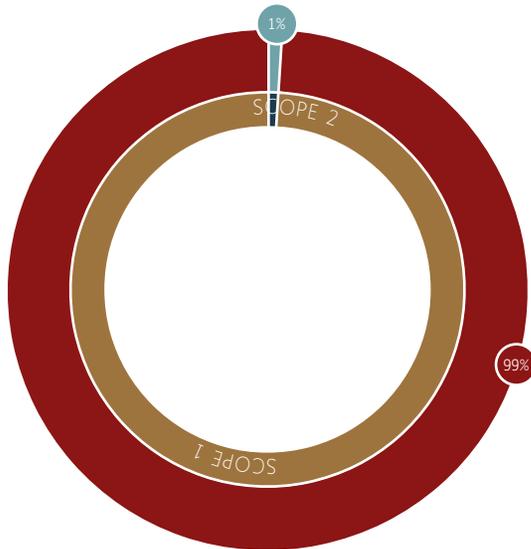
EMISSIONS BREAKDOWN (MT CO₂e)

4100 Bohannon Drive

Menlo Park, CA (Office)



SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON



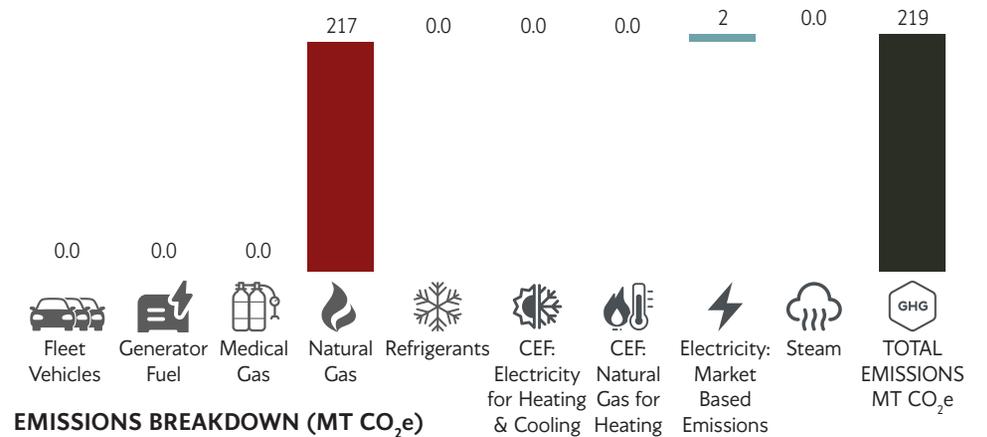
SCOPE 1 & 2 EMISSIONS BREAKDOWN

150
MT CO₂e
Location Based Emissions

2
MT CO₂e
Market Based Emissions

ELECTRICITY FUEL MIX

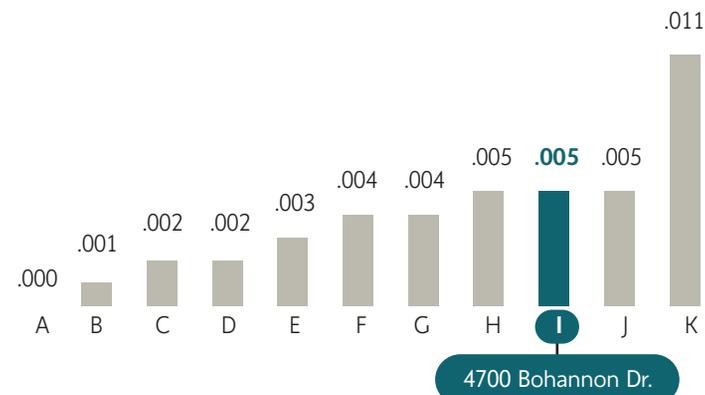
4100 Bohannon Dr. electricity emissions rate is 99% lower than the regional power mix.



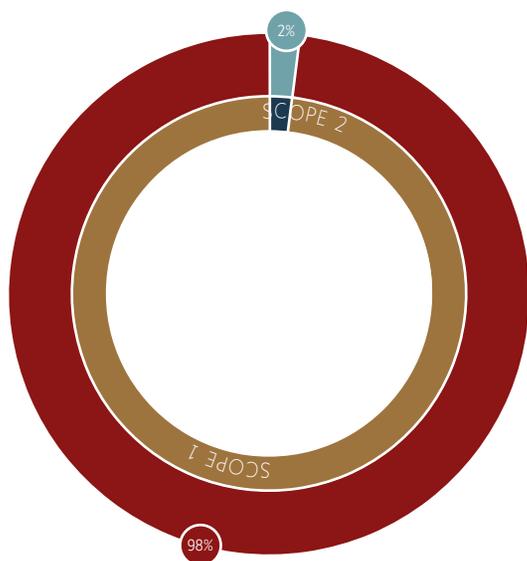
EMISSIONS BREAKDOWN (MT CO₂e)

4700 Bohannon Drive

Menlo Park, CA (Office)



SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON



295
MT CO₂e
Location Based Emissions

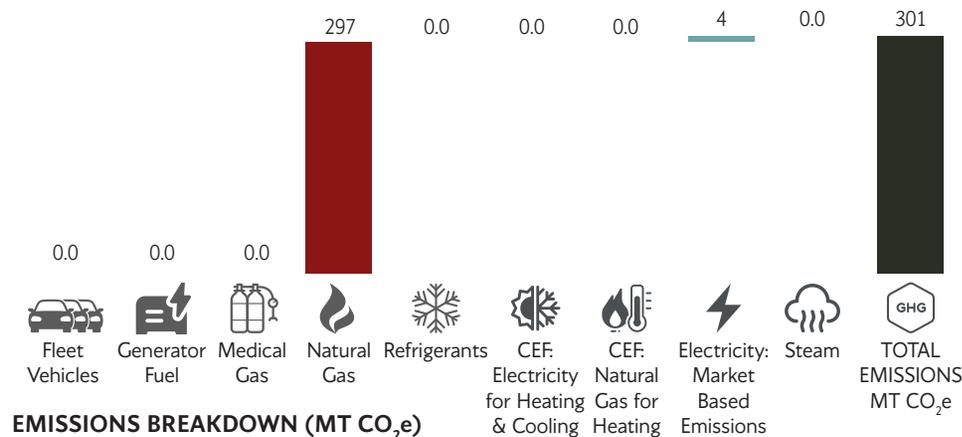
4
MT CO₂e
Market Based Emissions

ELECTRICITY FUEL MIX

4700 Bohannon Dr. electricity emissions rate is 99% lower than the regional power mix.



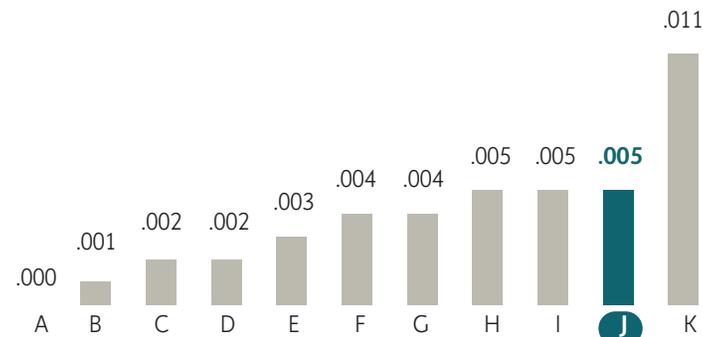
SCOPE 1 & 2 EMISSIONS BREAKDOWN



EMISSIONS BREAKDOWN (MT CO₂e)

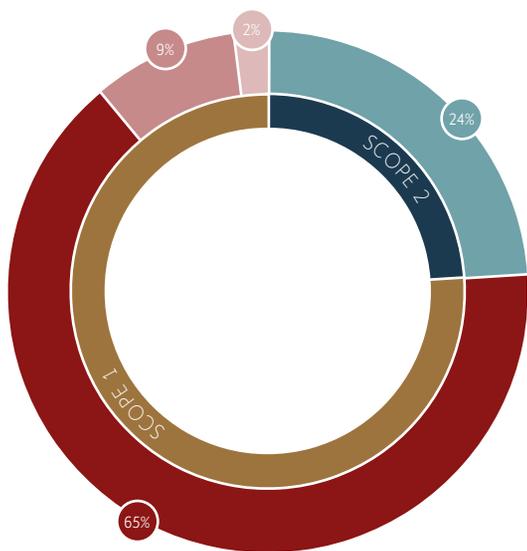
1195 West Fremont Avenue

Sunnyvale, CA (MOB)



SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON

1195 W. Fremont Ave.



717
MT CO₂e
Location Based Emissions

95
MT CO₂e
Market Based Emissions

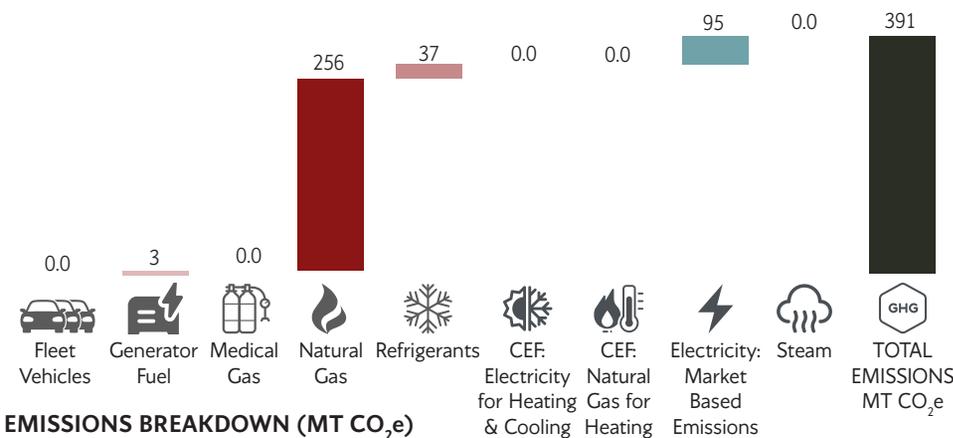
SCOPE 1
TOTAL EMISSIONS
296
MT CO₂e

SCOPE 2
TOTAL EMISSIONS
95
MT CO₂e

ELECTRICITY FUEL MIX

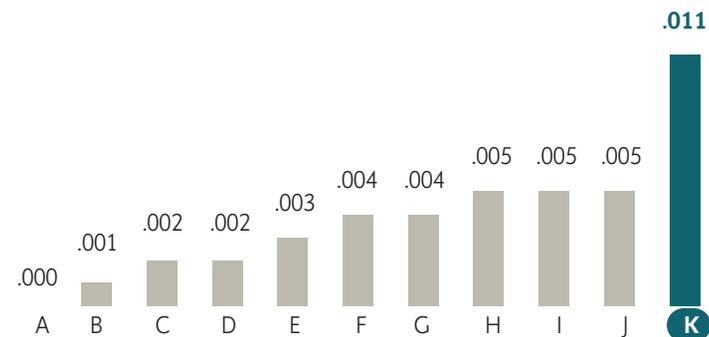
1195 W. Fremont Ave. electricity emissions rate is 87% lower than the regional power mix.

SCOPE 1 & 2 EMISSIONS BREAKDOWN



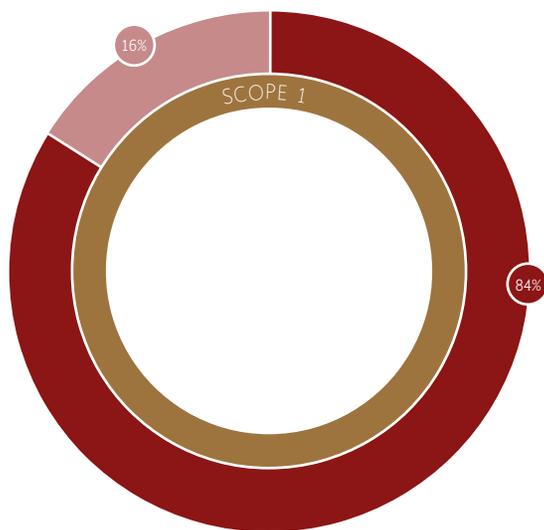
730 & 732 Welch Road

Palo Alto, CA (MOB)



SCOPE 1 & 2 CARBON INTENSITY (MT CO₂e/SF) COMPARISON

730 & 732 Welch Rd.



357
MT CO₂e
Location Based Emissions

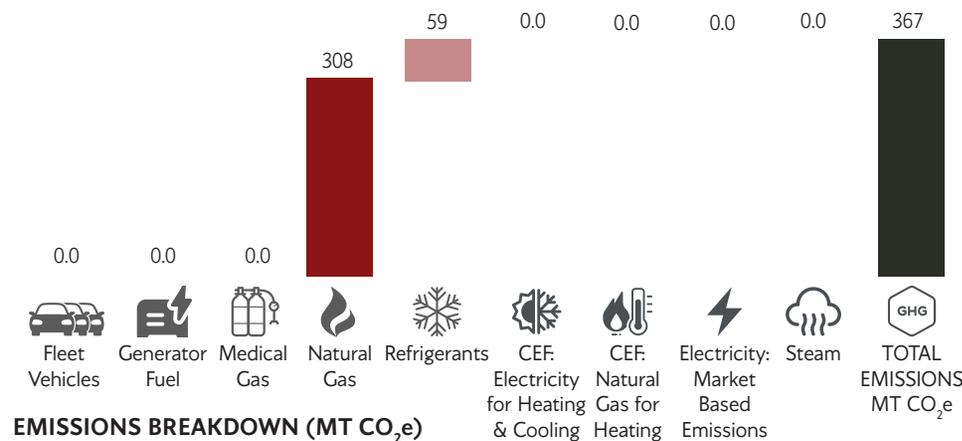
0.0
MT CO₂e
Market Based Emissions

ELECTRICITY FUEL MIX

730 & 732 Welch Road electricity emissions rate is 100% lower than the regional power mix.



SCOPE 1 & 2 EMISSIONS BREAKDOWN



FY24 UPSTREAM LEASED ASSETS EMISSIONS DETAIL

This inventory accounts for Stanford Children’s Scope 1 and Scope 2 emissions from upstream leased assets under Scope 3, Category 8 – Upstream Leased Assets, consistent with the GHG Protocol Corporate Value Chain (Scope 3) Standard. According to the GHG Protocol, emissions from leased facilities should be reported under Scope 3 if the reporting organization does not exercise operational control. As Stanford Children’s does not directly manage energy consumption, maintenance, or other emissions-generating activities in its upstream leased assets, these emissions are classified as Scope 3.8 rather than Scope 1 or Scope 2. This supports consistency, transparency, and alignment with best practices in GHG accounting and disclosure.

Emissions for Stanford Children’s upstream leased assets were estimated using relevant factors, including facility size and the average energy and refrigerant consumption of similar building types. These estimates provide a reasonable representation of the emissions associated with these facilities in the absence of direct data.

INDEX	FACILITY ADDRESS	OWNERSHIP TYPE	FACILITY TYPE	OCCUPIED AREA	UPSTREAM LEASED ASSETS MT CO ₂ e
1	1100 Van Ness Ave.	Upstream Leased Assets	MOB	26,622	105
2	321 Middlefield Rd.	Upstream Leased Assets	MOB	15,211	62
3	4200 Bohannon Dr.	Upstream Leased Assets	Office	16,965	45
4	180 El Camino Real	Upstream Leased Assets	Office	16,598	44
5	4300 Bohannon Dr.	Upstream Leased Assets	Office	15,154	40
6	2500 Grant Rd.	Upstream Leased Assets	Hospital	28,003	37
7	4600 Bohannon Dr.	Upstream Leased Assets	Home pharmacy/office	11,157	30
8	2452 Watson Ct.	Upstream Leased Assets	MOB	7,300	26
9	1290 59th St.	Upstream Leased Assets	MOB	6,280	26
10	106 La Casa Via	Upstream Leased Assets	MOB	6,262	25
11	5000 Pleasanton Ave.	Upstream Leased Assets	MOB	5,627	22
12	3480 Buskirk Ave.	Upstream Leased Assets	MOB	4,922	19
13	401 Quarry Rd.	Upstream Leased Assets	MOB	4,792	17
14	200 E. Granger Avenue	Upstream Leased Assets	MOB	4,310	17
15	1174 Castro St.	Upstream Leased Assets	MOB	4,177	17
16	14777 Los Gatos Blvd- Los Gatos	Upstream Leased Assets	MOB	4,202	17
17	2490 Hospital Dr.	Upstream Leased Assets	MOB	3,765	15
18	2495 Hospital Dr.	Upstream Leased Assets	MOB	3,765	15

INDEX	FACILITY ADDRESS	OWNERSHIP TYPE	FACILITY TYPE	OCCUPIED AREA	UPSTREAM LEASED ASSETS MT CO ₂ e
19	1720 El Camino Real	Upstream Leased Assets	MOB	3,484	14
20	212 San Jose St.	Upstream Leased Assets	MOB	2,397	9
21	1371 E. Foxhill Dr.	Upstream Leased Assets	Apartments	4,050	8
22	1685 Commercial Way	Upstream Leased Assets	MOB	1,850	7
23	2800 L Street	Upstream Leased Assets	MOB	1,800	7
24	2900 Whipple Ave.	Upstream Leased Assets	MOB	1,737	7
25	555 Knowles Dr.	Upstream Leased Assets	Office	2,499	7
26	2147 Mowry Ave.	Upstream Leased Assets	MOB	1,516	6
27	350 Park Dr.	Upstream Leased Assets	Apartments	2,550	5
28	1601 Ygnacio Valley Road - MOB	Upstream Leased Assets	MOB	1,340	5
29	170 Alameda de las Pulgas	Upstream Leased Assets	Hospital	3,050	4
30	1601 Ygnacio Valley Road - Office	Upstream Leased Assets	Office	1,242	3
TOTAL				212,627	664

725 WELCH ROAD CY2019 VS FY24 SCOPE 1 & 2 EMISSIONS COMPARISON (MT CO₂e)

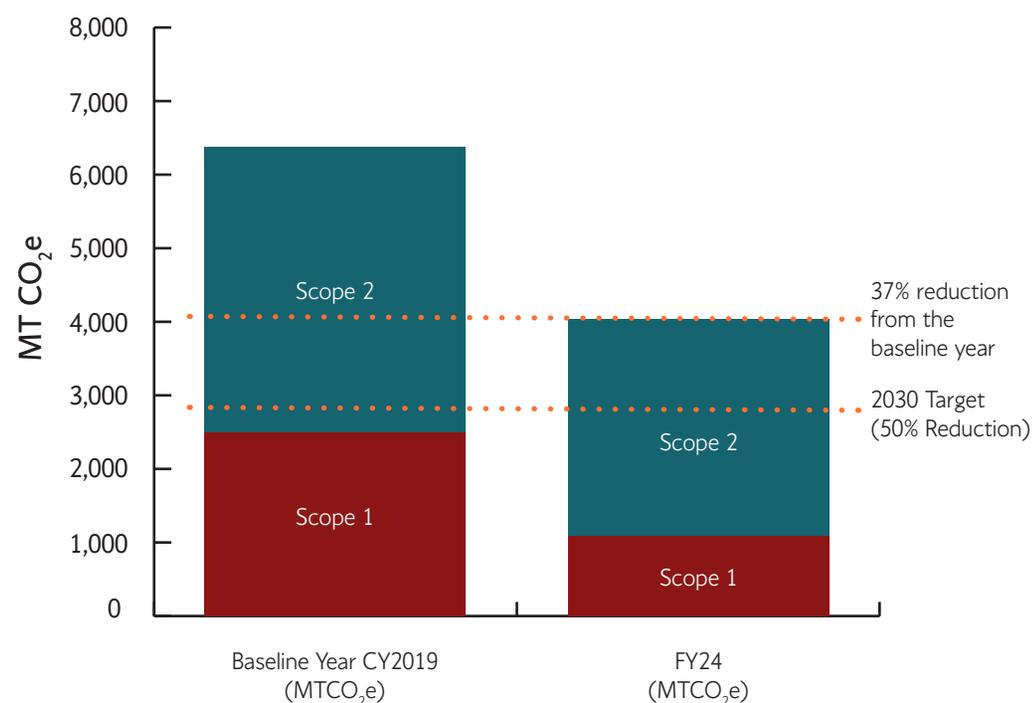
Stanford Children's, a signatory of the HHS Health Sector Climate Pledge, has committed to reducing its greenhouse gas emissions by 50% by 2030 and achieving net-zero emissions by 2050. In FY24, the organization made substantial progress toward these goals, achieving a 37% reduction in total Scope 1 and Scope 2 emissions compared to the CY2019 baseline. This reflects a combination of strategic infrastructure changes, operational efficiencies, and targeted sustainability initiatives.

The most significant reductions were observed in emissions from refrigerants and medical gases, which fell by 99% and 88% respectively. These steep declines show successful interventions in HVAC systems and anesthetic practices, both of which are known to contribute disproportionately to healthcare-related emissions. Emissions from natural gas supplied by the City of Palo Alto Utilities (CPAU) also declined by 19%, indicating improved building energy performance or reduced heating demand.

Regarding Scope 2, Stanford Children's emissions from the CEF: Electricity for Heating and Cooling were eliminated entirely, marking a 100% reduction and signaling a shift toward carbon-neutral energy sources. Steam emissions from the Stanford Steam Plant also declined by 13%, contributing to the overall downward trend.

While certain categories experienced a reduction in emissions, others saw an increase. Fleet vehicle emissions more than doubled, rising by 119%, and generator fuel use also increased by 50%, due to the increase in the use of backup power systems. These trends highlight opportunities for further decarbonization, such as electrifying the fleet and optimizing emergency energy strategies.

Stanford Children's overall emissions trajectory reflects a strong commitment to climate action. Its performance in FY24 underscores the organization's dedication to the principles of the HHS pledge and its broader mission to deliver sustainable, climate-conscious healthcare.



STANFORD CHILDREN'S FY24 SCOPE 3 GHG ANALYSIS AND COMPARISON

In FY24, Stanford Children's saw a notable shift in its Scope 3 greenhouse gas (GHG) emissions profile, reflecting both operational changes and broader supply chain dynamics. Compared to FY23, total Scope 3 emissions increased by 18%, rising from 101,663 MT CO₂e to 120,339 MT CO₂e. This increase reversed the previous year's decline and brought emissions closer to FY22 levels.

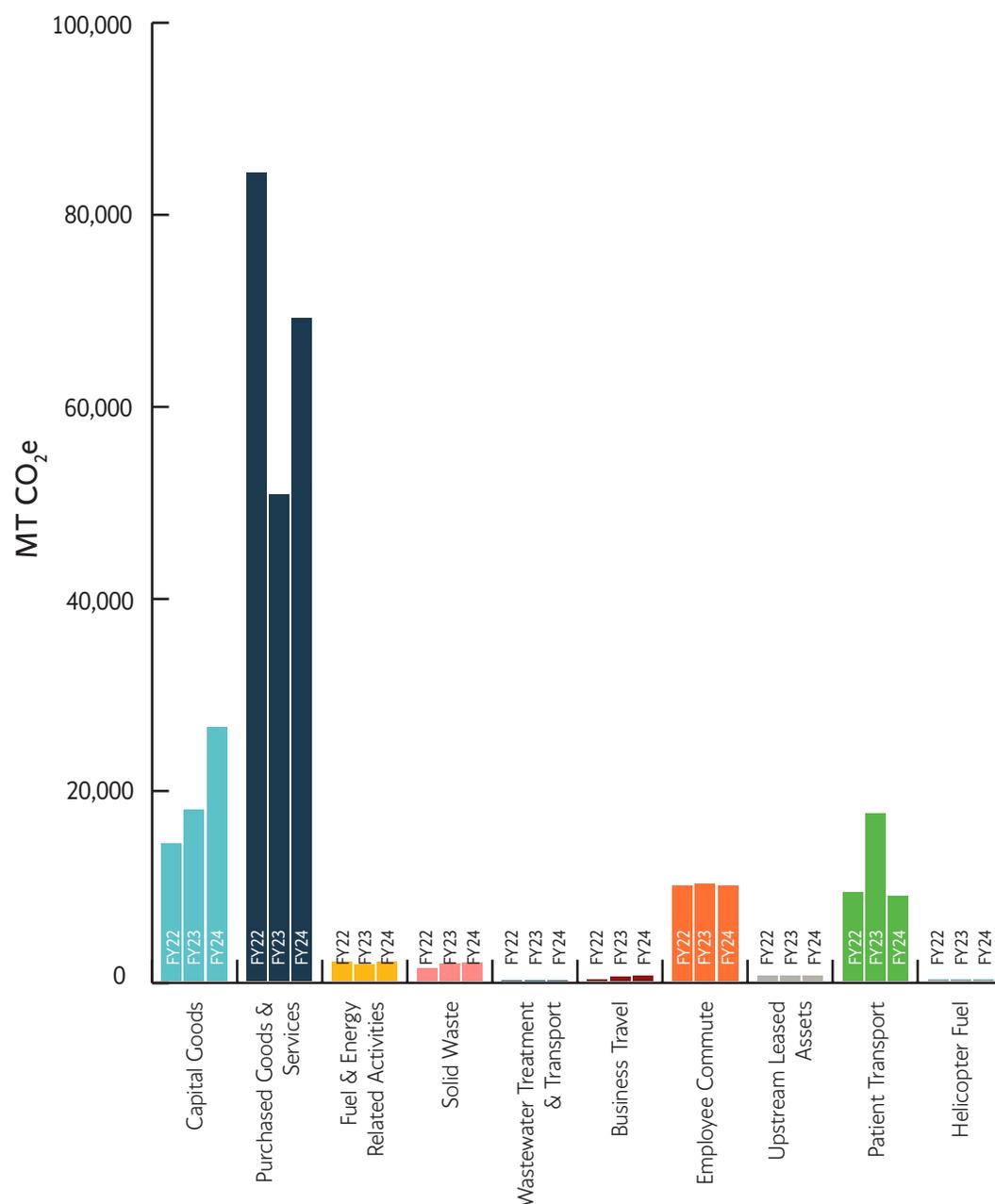
The most significant contributor to this rise was Capital Goods, which surged by 48%, reaching 26,617 MT CO₂e. This reflects increased investment in infrastructure, equipment, and construction activities. Purchased Goods & Services also rebounded, increasing by 36%, due to the increase in procurement activities after a dip in FY23.

Other categories saw more modest increases. Fuel & Energy Related Activities rose by 12%, and Solid Waste emissions grew by 7%. Wastewater Treatment & Transport emissions increased by 41%, though the absolute values remain low. Business Travel and Upstream Leased Assets rose by 9% and 10%, respectively.

Conversely, Patient Transport emissions dropped sharply by 49%, due to reduced patient volume. Employee Commuting saw a slight decline of 2%, which reflect reduced commuting. Helicopter Fuel emissions increased by 32%, though this category remains a small portion of the overall footprint.

This mixed performance underscores the complexity of managing Scope 3 emissions, which are influenced by external suppliers, infrastructure decisions, and behavioral factors. The upward trend in 2024 highlights the need for continued engagement with vendors, investment in low-carbon capital goods, and strategic planning to align with long-term climate goals.

STANFORD CHILDREN'S SCOPE 3 EMISSIONS COMPARISON (FY22, FY23, FY24)



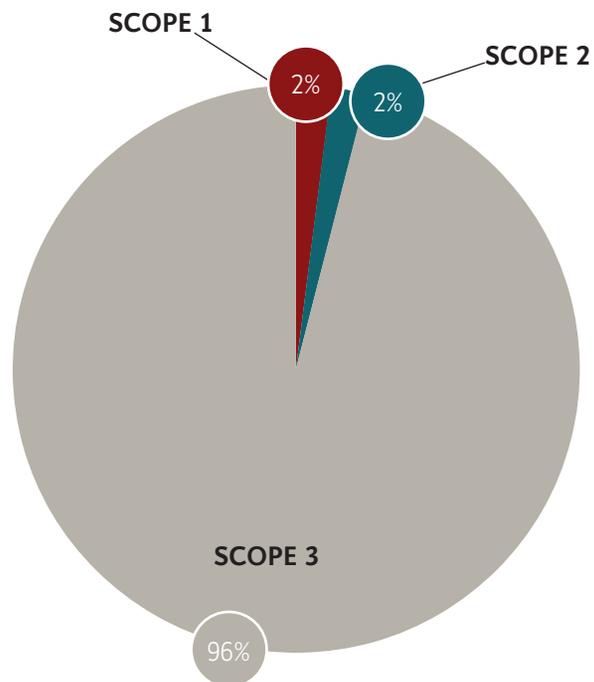
CONCLUSION

In FY24, Stanford Children's Health reported 126,008 MT CO₂e in total emissions, marking a 17% increase from FY23. While Scope 1 and 2 emissions continued to decline by 7% and 5%, respectively. Scope 3 emissions rose by 18%, driven primarily by increases in capital goods (+48%) and purchased goods and services (+36%). Significant reductions in 725 Welch Road refrigerants (-99%) and medical gases (-88%) reflect successful mitigation efforts.

The elimination of electricity emissions from the Central Energy Facility and a 13% reduction in steam emissions further demonstrate progress in energy decarbonization.

Overall, Stanford Children's continues to make measurable progress toward its HHS Health Sector Climate Pledge commitment of a 50% emissions reduction by 2030 and net-zero by 2050. The results highlight both successful interventions and areas where sustained efforts will be essential.

STANFORD CHILDREN'S EMISSIONS BREAKDOWN (MT CO₂e)



RECOMMENDATIONS



Reliance on diesel generators for backup energy can be reduced through investments in battery energy storage systems (BESS) and resilient renewable energy solutions, which can provide cleaner and more reliable alternatives.



Transitioning fleet vehicles to electric or hybrid models, while simultaneously investing in charging infrastructure across major facilities, will significantly reduce transportation-related emissions.



Engaging suppliers to obtain more accurate, supplier-specific emission factors for purchased goods and services. This would improve the precision of Scope 3 accounting and support more sustainable procurement practices. In parallel, integrating carbon impact assessments into capital planning and prioritizing low-carbon materials and energy-efficient systems can help mitigate emissions from infrastructure investments.



To address waste-related emissions, Stanford Children's should promote staff education programs focused on waste minimization, expand recycling and composting initiatives, and track waste diversion rates.

APPENDIX

TABLE 1: LIST OF ESTIMATED DATA

Facility Address	Fleet Vehicles	Generator Fuel	Medical Gas	Natural Gas	Refrigerants	CEF: Electricity for Heating and Cooling	CEF: Natural Gas for Heating	Purchased Electricity - Market-Based Emissions	Purchased Electricity - Location-Based Emission	Steam	Capital Goods	Purchased Goods & Services	Fuel & Energy Related Activities	Wastewater Treatment and Transport	Waste	Business Travel	Employee Commute	Helicopter Fuel	Patient Transport
725 Welch Road	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided	Provided
1290 59th St.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	N/A
2147 Mowry Ave.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
14601 S. Bascom Ave.	N/A	N/A	N/A	Provided	Estimated	N/A	N/A	Provided	Provided	N/A	N/A	N/A	Provided	Provided	Provided	N/A	Provided	N/A	Provided
14651 S. Bascom Ave.	N/A	N/A	N/A	Provided	Estimated	N/A	N/A	Provided	Provided	N/A	N/A	N/A	Provided	Provided	Provided	N/A	Estimated	N/A	Provided
321 Middlefield Rd.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
555 Knowles Dr.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Estimated	N/A	Provided
4100 Bohannon Dr.	N/A	N/A	N/A	Provided	Estimated	N/A	N/A	Provided	Provided	N/A	N/A	N/A	Provided	Estimated	Provided	N/A	Provided	N/A	N/A
4200 Bohannon Dr.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	N/A
4300 Bohannon Dr.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	N/A
4700 Bohannon Dr.	N/A	N/A	N/A	Provided	Estimated	N/A	N/A	Provided	Provided	N/A	N/A	N/A	Provided	Estimated	Provided	N/A	Provided	N/A	N/A
4600 Bohannon Dr.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Provided	N/A	Provided	N/A	N/A
200 E. Granger Ave.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
1174 Castro St.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
2495 Hospital Dr.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Estimated	N/A	Provided
2490 Hospital Dr.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
2500 Grant Rd.	N/A	Estimated	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	N/A
401 Quarry Rd.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
700 Welch Rd.	N/A	N/A	N/A	Provided	Provided	N/A	N/A	Provided	Provided	N/A	N/A	N/A	Provided	Provided	Provided	N/A	Provided	N/A	N/A
730 and 732 Welch Specialty Services	N/A	N/A	N/A	Provided	Provided	N/A	N/A	Provided	Provided	N/A	N/A	N/A	Provided	Provided	Provided	N/A	Provided	N/A	Provided
750 Welch Rd.	N/A	N/A	N/A	Provided	Estimated	N/A	N/A	Provided	Provided	N/A	N/A	N/A	Provided	Provided	Provided	N/A	Provided	N/A	N/A
770 Welch Rd.	N/A	N/A	N/A	Provided	Estimated	N/A	N/A	Provided	Provided	N/A	N/A	N/A	Provided	Provided	Provided	N/A	Provided	N/A	Provided
777 Welch Rd.	N/A	N/A	N/A	Provided	Provided	N/A	N/A	Provided	Provided	N/A	N/A	N/A	Provided	Provided	Provided	N/A	Estimated	N/A	N/A
2452 Watson Ct.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
180 El Camino Real	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
5000 Pleasanton Ave.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
170 Alameda de las Pulgas	N/A	Estimated	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
2900 Whipple Ave.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Estimated	N/A	Provided
212 San Jose St.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
1100 Van Ness Ave.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
1685 Commercial Way	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
1195 West Fremont Ave.	N/A	Provided	Provided	Provided	Provided	N/A	N/A	Provided	Provided	N/A	N/A	N/A	Provided	Provided	Provided	N/A	Provided	N/A	Provided
1601 Ygnacio Valley Road - Office	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	N/A
1601 Ygnacio Valley Road - MOB	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided

Facility Address	Fleet Vehicles	Generator Fuel	Medical Gas	Natural Gas	Refrigerants	CEF: Electricity for Heating and Cooling	CEF: Natural Gas for Heating	Purchased Electricity - Market-Based Emissions	Purchased Electricity - Location-Based Emission	Steam	Capital Goods	Purchased Goods & Services	Fuel & Energy Related Activities	Wastewater Treatment and Transport	Waste	Business Travel	Employee Commute	Helicopter Fuel	Patient Transport
1720 El Camino Real	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
14777 Los Gatos Blvd.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	N/A
3480 Buskirk Ave.	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Provided	N/A	Provided
106 La Casa Via	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Estimated	N/A	Provided
350 Park Dr	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	N/A	N/A	N/A
1371 E. Foxhill Drive	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	N/A	N/A	N/A
2800 L Street	N/A	N/A	N/A	Estimated	Estimated	N/A	N/A	Estimated	Estimated	N/A	N/A	N/A	Estimated	Estimated	Estimated	N/A	Estimated	N/A	Provided

TABLE 2: 725 WELCH ROAD CAMPUS YEAR-TO-YEAR EMISSIONS REDUCTION

Emissions Per Scope	Emissions Category	Baseline Year - CY 2019 (MT CO ₂ e)	CY 2020 (MT CO ₂ e)	CY2021 (MT CO ₂ e)	FY22 (MT CO ₂ e)	FY23 (MT CO ₂ e)	FY24 (MT CO ₂ e)	FY24 % Change over Baseline Year
SCOPE 1	Natural Gas CPAU	1,143	681	753	789	962	921	-19%
	Fleet Vehicles**	21	12	48	50	43	46	119%
	Generator Fuel	34	31	37	45	71	51	50%
	Medical Gas	533	344	428	412	291	64	-88%
	Refrigerants	767	74	14	11	8	9	-99%
SCOPE 2	Purchased Electricity - Market-Based Emissions	-	-	-	-	-	-	-
	<i>Purchased Electricity - Location-Based Emissions*</i>	5,683	5,744	6,380	7,439	6,849	5,495	-3%
	CEF Electricity for Heating and Cooling	651	548	655	274	-	-	-100%
	CEF Natural Gas for Heating	105	175	233	263	303	237	125%
	Steam from Stanford Steam Plant	3,119	3,015	2,989	2,891	2,853	2,710	-13%
SCOPE 3	Capital Goods**	31,406	14,130	13,405	14,455	17,980	26,617	-15%
	Purchased Goods & Services**	84,276	85,406	90,029	72,847	50,933	69,298	-18%
	Fuel & Energy Related Activities	-	-	1,415	980	732	703	-
	Waste	774	797	887	762	1,080	1,336	73%
	Wastewater Treatment and Transport	2	9	10	9	4	9	340%
	Business Travel**	509	181	112	275	552	603	18%
	Employee Commuting	7,405	8,978	6,800	7,023	7,411	7,222	-2%
	Patient Transport	8,954	9,635	11,215	7,764	12,631	3,752	-58%
Helicopter Fuel	86	55	64	65	59	77	-10%	
TOTAL		139,785	124,071	129,094	108,914	95,911	113,655	-19%

*The GHG Protocol requires the reporting of Location-based emissions, with the option of excluding the emission category from the total.

**Purchased Goods and Services, Capital Goods, Business Travel, and Fleet Vehicle emissions for all facilities are included in the 725 Welch Road facility FY24 data.

