Southcoast Health System Inc.

2024 Sustainability Report

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Who We Are

Southcoast Health proudly provides world-class healthcare and service in Southeastern Massachusetts and Rhode Island. We are a not-for-profit, charitable, community-based health system offering an integrated continuum of health services.

Southcoast was incorporated in 1996 through a merger of Charlton Memorial Hospital in Fall River, St. Luke's Hospital in New Bedford, and Tobey Hospital in Wareham. We are the largest employer in the region with over 8,000 employees.

Today, Southcoast has three hospitals and 815 licensed beds to serve 724,000 clients within the 33 communities in our primary service area. Our three emergency centers treat over 155,000 patients and our maternity team delivers more than 3,000 newborns each year.

Reducing our Environmental Impact

Southcoast Health is on a pathway committed to environmental sustainability. As the region's largest healthcare provider, we have a long history of proactively identifying our community's needs to provide comprehensive healthcare to our families, friends, and neighbors. We are stepping up once again to improve the health of our environment, which directly affects the health of us all.

Energy Initiatives

Over the last year, we completed upgrading our lights to LEDs in Tobey Hospital and the Fairhaven Business Center. This transition reduces our energy consumption, and we are currently in the process of fully upgrading our lights to LEDs in St. Luke's Hospital and Charlton Memorial Hospital.

Vehicle Initiatives

In September 2024, we began converting our courier fleet to hybrid vehicles as part of our commitment to reduce Scope 1 emissions. Additionally, the installation of electric vehicle (EV) chargers has been completed across the system, bringing EV chargers to each hospital and the business center. This contributes to a more sustainable transportation infrastructure for staff, patients, and visitors.

Waste Initiatives

Southcoast's Charlton EP Lab has implemented a medical device reprocessing program to reduce waste and extend the life of single-use equipment, which improves both environmental impact and cost efficiency. Other departments at Southcoast purchase reprocessed medical devices as well. Additionally, Southcoast diverts 100% of its non-recyclable waste to a Waste-to-Energy (WTE) facility. This material is converted into usable energy rather than sent to landfills.

Food & Nutrition Initiatives

Southcoast has adopted the Leanpath software to track and reduce food waste in our hospitals. Leanpath supports more sustainable and efficient food service operations by identifying areas in which we can prevent food waste. We also have introduced hydroponic gardens at each of our hospitals, which provides fresh lettuce and removes the environmental impact of traditional agriculture and transportation. Additionally, hydroponic vegetables have more health benefits compared to traditionally grown agriculture. These benefits include higher nutritional densities in Vitamin K, lutein, folate, potassium, magnesium, and calcium.

Thought Leadership

In 2024, Southcoast Health reinforced our role as a thought leader in sustainable health care:

- Southcoast Health helped lead the Massachusetts Health & Hospital Association (MHA) workgroup to establish sustainability requirements for MassHealth.
- Southcoast Health presented as a mentor organization for the Health & Human Services Office of Climate Change & Health Equity Catalytic Program.
- Southcoast Health created and led the Sustainability Track at the Yankee Alliance 36th Annual Conference, where we guided dialogues about sustainability strategy.
- In recognition of our leadership, Southcoast Health was honored by the White House for our commitment to advancing sustainability in health care.

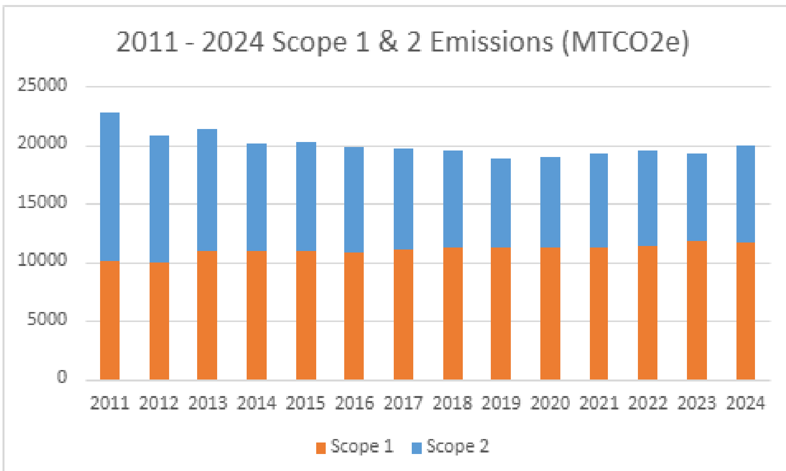
Tracking Our Emissions

The **health care sector is responsible for approximately 8.5% of carbon emissions** in the United States. As a health care organization, we believe that Southcoast has an obligation to lower our overall carbon emissions.

We collect both internal and external data and utilize publicly available conversion factors to establish our annual Scope 1 and 2 carbon emissions for Southcoast Hospitals Group (SHG). (Appendix A)

Below is our annual trend of carbon emissions since our baseline year of 2011.

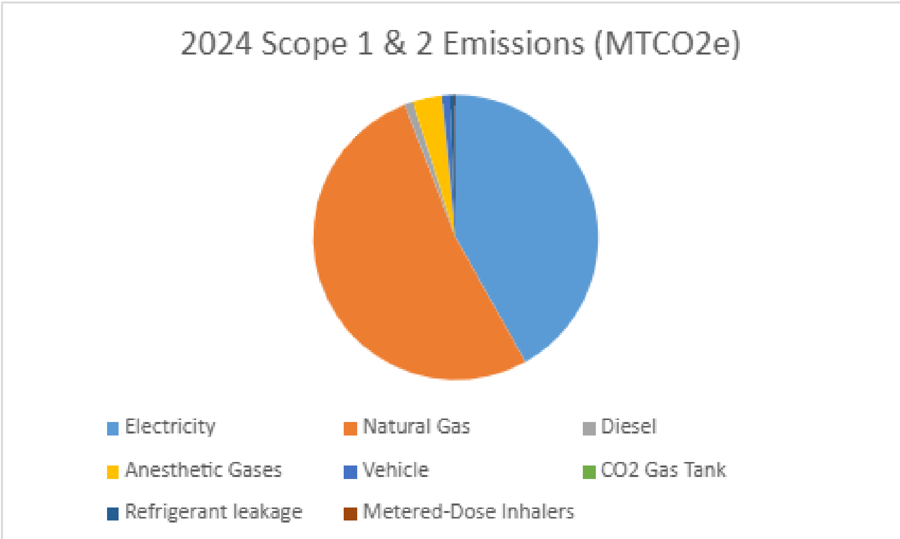
Figure 1. Scope 1 & 2 Carbon Emissions Annual Trend



The highest level of documented carbon emissions at the hospitals was 22,761 tons CO2e in 2011. To achieve a 50% reduction below the 2011 baseline, Southcoast needs to lower annual Scope 1 and 2 total carbon emissions by 11,380 tons CO2e compared to 2011.

In 2023, SHG emitted 19,287 tons CO2e, reflecting about a 15% reduction from the baseline. **In 2024, SHG emitted 19,958 tons CO2e. As of 2024, we need to lower our Scope 1 and 2 emissions by about 8,578 tons CO2e to meet our 2030 goal.**

Figure 2. 2024 Scope 1 & 2 Emissions



Scope 1 Emissions

Scope 1 emissions include direct emissions from sources owned or controlled by Southcoast, such as burning natural gas on-site for boilers and food service, diesel used to run back-up generators, anesthetic gases emitted during surgery, refrigerant leakage, metered-dose inhaler administrations, and gasoline consumed by company-owned vehicles.

- Onsite Fuel Combustion:
    - Natural gas: 10433.1263 tons CO2e
    - Diesel: 196.3075 tons CO2e
- Fleet Vehicles:
    - 167.6834 tons CO2e
- Anesthetic Gas Use:
    - 671.6583 tons CO2e
- CO2 Gas Tanks:
    - 0.4799 tons CO2e
- Refrigerant Leakage:
    - 116.7481 tons CO2e
- Metered-Dose Inhalers
    - 13.5822 tons CO2e

Scope 2 Emissions

Scope 2 emissions are indirect emissions from the generation of electricity purchased by SHG from utility companies.

- Electricity:
  - 8354.7879 tons CO_2e

Lowering Our Scope 1 & 2 Emissions

Signatory of the HHS pledge

At our hospitals, we have made a commitment with the Office of Human & Health Services to reduce our greenhouse gas emissions. By committing to this pledge, we are tracking emissions and developing plans to reduce our carbon footprint, with the goal of reducing Scope 1 & 2 greenhouse gas emissions 50% by 2030 and achieving net-zero by 2050.

Greenhouse gas reductions

SHG has reduced Scope 1 & 2 greenhouse gas emissions by about 12% since 2011, our baseline.

Scope 3 (Supply Chain) Emissions Inventory

Scope 3 encompasses emissions that are not produced by the organization itself and are not the result of activities from assets owned by them, but by those that are indirectly responsible for up and down its value chain. The Southcoast Sustainability Team had reached out to several major vendors that service the hospitals to request information regarding our Scope 3 Emissions, Category 1: Emissions from Purchased Goods & Services. Other categories within Scope 3 Emissions encompass those related to sourcing of fuel and energy, upstream transportation of products, waste generated in operation, etc.

Southcoast Health selected 4 categories (as shown in Chart 1) for a detailed emissions evaluation (detailed methods in Appendix B) for the calendar year 2024. The total CY24 Scope 3 emissions were 89,442 CO_2e metric tons.

Southcoast Health is planning to collaborate with vendors to reduce supply chain carbon emissions and create a positive environmental impact. Additionally, Southcoast Health intends to extend its efforts by adding more Scope 3 categories as more data becomes available.

Chart 1. Scope 3 Emissions for CY24 (GHG emissions in CO2e metric tons)

Category 1 – Purchased Goods & Services	72982
Category 3 – Fuel- and Energy- Related Activities	3213
Category 4 – Upstream Transportation & Distribution	12309
Category 5 – Waste Generated in Operation	939
Total	89442

Food Waste Emissions

Food waste contributes to greenhouse gas emissions as well. We used the EPA WARM model to calculate the emissions on total pounds of food waste. We received the poundage amount from Leanpath, a food waste prevention software deployed in our three hospital commercial kitchens. To emulate the typical mix of a foodservice plate, we applied a percentage mix of 65% non-meat, 35% meat protein. The WARM Model resulted in 3.11 CO2e metric tons of food waste from the haul to the WTE site, and 275.87 CO2e metric tons for its end-of-life. This falls as part of Category 5.

Climate Resilience Plan

To ensure continuity of service in the face of increasingly frequent and severe extreme weather events, we have used the CDC Social Vulnerability Index (SVI) and FEMA Resilience Analysis & Planning Tool (RAPT) to pinpoint the most vulnerable populations surrounding all three hospitals in the face of various climate disasters. (Image 1) Our primary climate risks involve flooding and hurricanes. We have detailed a strategic approach that will enable us to proactively order and prepare the necessary resources within the hospital in case of one of these events. (Detailed in Appendix C)

Figure 3: CDC SVI index around St. Luke's Hospital (dark blue, highest vulnerability)

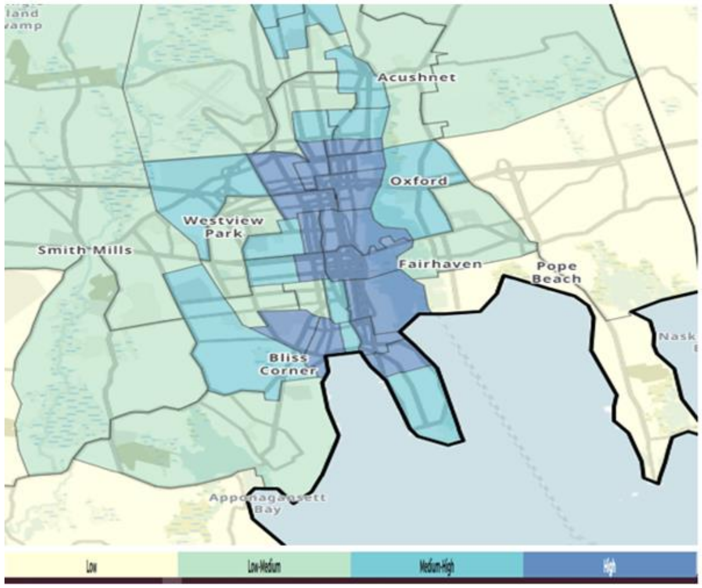


Figure 4: CDC SVI index around Charlton Memorial Hospital

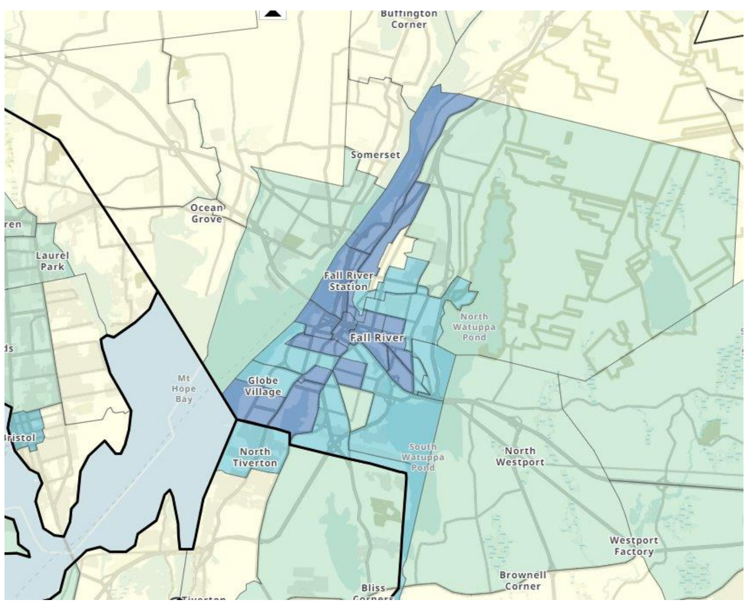
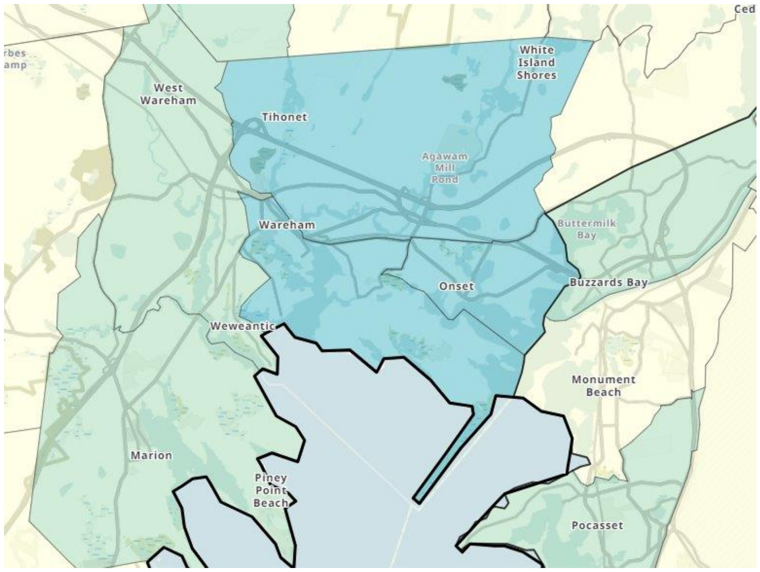


Figure 5: CDC SVI Index around Tobey Hospital



Our hospitals are designed with redundant systems to withstand extreme weather events, ensuring their resiliency and functionality for a minimum of 96 hours during such occurrences. Our facilities are resilient to fierce winds, with redundant sources for electricity, natural gas, and water supply. Additionally, we maintain enough emergency drinking water and dried food supplies in each hospital. Our facility teams are trained for heat wave scenarios, and we conduct extreme weather drills in each hospital at least twice a year. (Detailed in Appendix D)

Sustainability Goals

At Southcoast, we have much work ahead of us on our environmental sustainability journey. In the decades ahead, we aim to:

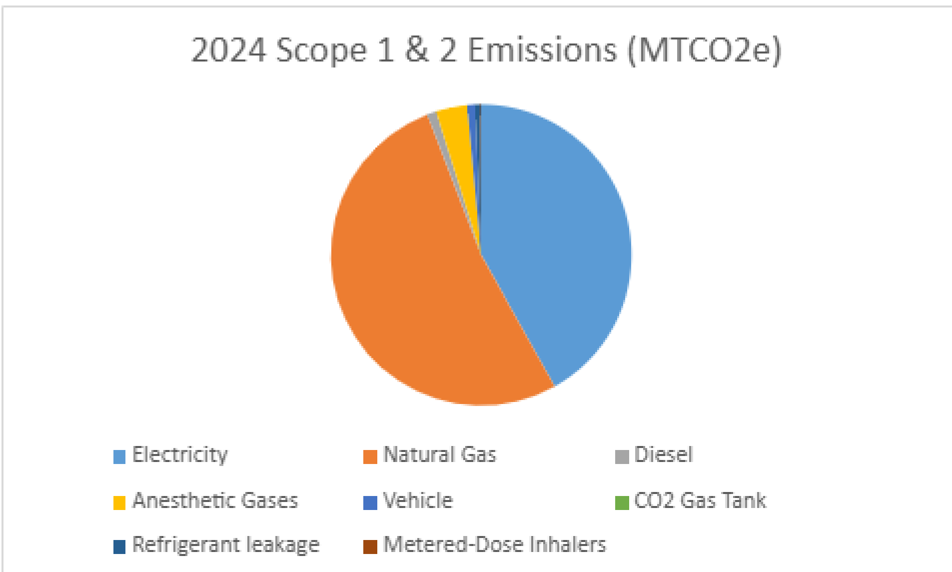
1. Extend our GHG emissions data collection to not only include our hospitals, but also to collect this data across urgent care facilities and physician offices.
2. Finalize a comprehensive GHG reduction plan. This includes:
    a. Reducing Scope 1 and 2 emissions.
    b. Establishing Scope 3 emissions goals in collaboration with our supply chain.
3. Complete MassHealth Bulletin 202 requirements.

Appendix A

This appendix serves as a reference detailing the methodology for collecting our raw data for Scope 1 and 2 emissions and the subsequent conversion into carbon dioxide equivalents.

Figure 1 provides a comprehensive breakdown of carbon emissions in 2024. Electricity is a Scope 2 emission; everything else is a Scope 1 emission.

Figure 1: Breakdown of Carbon Emissions for 2024



Emission Source	2024 Emission in ton
Electricity	8354.7879
Natural Gas	10433.1263
Diesel	196.3075
Anesthetic Gases	839.8203
Vehicle	167.6834
CO2 Gas Tank	4.7228
Refrigerant leakage	116.7481
Metered-Dose Inhalers	13.5822

Section A1: Terms & Definitions

Global Warming Potential (GWP): how effectively a gas traps heat in the atmosphere over 100 years compared to carbon dioxide (CO_2).

- Example: Methane has a GWP of 27, meaning one ton of methane traps as much heat as 27 tons of CO_2.
- GWP values in this report (except anesthesia and MDIs) are based on the IPCC 6th Assessment Report (AR6). Past data has been updated according to AR6.
    - https://ghgprotocol.org/sites/default/files/2024-08/Global-Warming-Potential-Values%20%28August%202024%29.pdf
- Metered-dose inhaler (MDI) GWPs based on data from the PrescQIPP database, Version 2.35.
    - https://www.prescqipp.info/our-resources/bulletins/bulletin-295-inhaler-carbon-footprint/

Emission Factor: indicates the amount of CO_2 equivalent emissions produced by a specific energy source per unit (e.g., joules, kilowatt-hours, tons, gallons).

- Electricity and natural gas emission factors in this report are sourced from Energy Star's Historical Greenhouse Gas Factors, 2000-present.
    - https://www.energystar.gov/buildings/tools-and-resources/historical-greenhouse-gas-factors-2000-present
- Vehicle emissions are based on data from GHG Protocol: Cross Sector Tool – Transport Worksheet
    - https://ghgprotocol.org/calculation-tools-and-guidance
- Fuel Oil emissions are based on data from GHG Protocol: Cross Sector Tool – Stationary Combustion.
    - https://ghgprotocol.org/calculation-tools-and-guidance
- Past data has been updated with these most recent versions.

GWP focuses on a gas type's heat-trapping ability, whereas emission factors focus on the emissions associated with using a specific fuel type.

Section A2: Electricity Carbon Emissions (Scope 2)

We obtain electricity data directly from our utility bills provided by the utility provider. To calculate the total electricity consumption for a given facility, we sum up all the electricity bills for that specific location and apply the emission factor from Energy Star relevant to the corresponding year.

To elaborate, we extracted the year ending December 2024 from Energy Star's Historical Greenhouse Gas Factors, 2000 – present. We added all meters up per hospital and applied the emission factor for the year 2024, which is 71.8380 in the NEWE region. Past data has been updated with the most recent publication of factors.

$$\frac{(Meter\ A\ kBtu\ +\ Meter\ B\ kBtu\ +\ Meter\ C\ kBtu)}{1000\ \frac{kBtu}{MMbtu}} \cdot \frac{\left(71.8380\ \frac{CO2eq}{MMBtu}\right)}{1000\ \frac{kg}{ton}} = CO2e\ ton$$

Section A3: Natural Gas Carbon Emissions (Scope 1)

Our facilities use natural gas for boilers, cooking, and sterilization. Like electricity data, we also receive our natural gas data directly from our utility bills provided by the provider. We aggregate all usage within the same facility for the calculation.

To elaborate, we extracted the year ending December 2024 from Energy Star's Historical Greenhouse Gas Factors, 2000 – present. We added all meters up per hospital and applied the emission factor for the year 2024, which is 53.1148 CO2e/MMBtu. (https://www.energystar.gov/buildings/tools-and-resources/historical-greenhouse-gas-factors-2000-present)

$$(Meter\ A\ MMBtu\ +\ Meter\ B\ MMBtu\ +\ Meter\ C\ MMBtu) \cdot \frac{\left(53.1148\ \frac{CO2eq}{MMBtu}\right)}{1000\ \frac{kg}{ton}} = CO2e\ ton$$

Section A4: Company Owned Vehicles Emissions (Scope 1)

SHG owns vehicles that are used for maintenance, daily operations, security, and courier services. We compiled the dollar amounts from our Accounts Payable department for fuel card usage in vehicles. These figures are aggregated monthly. Subsequently, we determine the monthly average regular gas price for Massachusetts from the EIA to calculate the amount of fuel used per month (in gallons).

To elaborate, we extracted the emission factors from the GHG Cross-Sector Tool – Transport Tool for a 2021 passenger vehicle. This resulted in 8.78 kg CO2e/US Gallon, 0.00051 kg CH4/US Gallon, and 0.0014 N2O/US Gallon. Past data has been updated with this version's calculation.

We add all fuel cards up and apply this emission factor. We also include the GWP of CH4, 27, and nitrous oxide, 273, in our equation because the combustion of motor gasoline also releases these GHGs. These GWPs come from the AR6.

We use the Greenhouse Gas Factor Tool V4.2 Stationary Combustion to determine the emission factors for methane and nitrous oxide.

$$\left(\frac{Fuel\ Cost}{EIA}\right) = Gallons$$

$$Gallons \cdot \frac{\left(8.81\ \frac{kg}{CO2e} + CH4\ factor\ \cdot\ 27\ \frac{CO2}{CH4} + N2O\ factor \cdot 273\ \frac{CO2}{N2O}\right)}{1000\ \frac{kg}{ton}} = CO2e\ ton$$

Section A5: Diesel Equipment Carbon Emissions (Scope 1)

Our facilities employ No. 2. Fuel Oil and ultra-low sulfur diesel as emergency backup sources, serving as an alternative for a boiler when natural gas has been cut. It is also used as an energy source for emergency generators when electricity is down. These generators are run weekly for preventative maintenance, load tested monthly and have tri-annual testing requirements. We also use some diesel in our low-pressure boilers. We monitor the quantity purchased from each supplier as the foundation for calculating carbon emissions and repeat a calculation that mirrors the second part of our vehicle calculation. The GWPs remain the same, and the emission factors are as follows: 2.910 kg CO2/L, 0.00039 kg CH$/L, and 0.00002 kg N2O/L.

Section A6: Anesthetic Gas Carbon Emissions (Scope 1)

Anesthetic gases play a crucial role in surgeries, but come with significantly high GWPs:

- 539 for isoflurane
- 2540 for desflurane
- 144 for sevoflurane

The GWPs for the above come from the American Society of Anesthesiologists (ASA): https://www.asahq.org/about-asa/governance-and-committees/asa-committees/environmental-sustainability/greening-the-operating-room/inhaled-anesthetics

Notably, desflurane is around seventeen times worse than sevoflurane, prompting a concerted effort in the anesthesiologist community to minimize its usage in recent years. Despite this reduction, complete elimination remains challenging due to specific anesthesiologist preferences and will require a SHG-wide behavioral shift.

Each month, our anesthetic gas supplier, McKesson, provides a shipping record to our Pharmacy department. Using this information, along with the GWP and density data, we calculated carbon emissions monthly.

$$\frac{Quantity \cdot Volume\ per\ \tan k \cdot \left(\frac{Density\ \frac{g}{ml}}{1000}\right) \cdot GWP}{1000\ \frac{kg}{ton}} = Anesthesia\ CO2e\ tons$$

Additionally, we procure N2O tanks for anesthesia use from the supplier AirGas.

Like the calculation process above, AirGas provides us with a monthly purchase invoice to facilitate the tracking of carbon emissions associated with nitrous oxide. The calculation is the same as above, but without density conversion as the data is already in weight-based measurements. We use GWP 273 for nitrous oxide, also from the ASA.

Previous reports included nitrous oxide for all SHG properties; it has now been categorized by hospital.

Section A7: CO_2 Gas Tank Carbon Emissions (Scope 1)

We also procure CO_2 gas tanks from AirGas, as these tanks are used for dry ice production.

Like the calculation for N_2O anesthetic gas carbon emissions, AirGas provides us with a monthly purchase invoice to facilitate the tracking of carbon emissions associated with CO_2 gas tanks. The calculation is the same as the anesthetic flurane calculation above, but without density conversion as the data is already in weight-based measurements.

Previous reports included carbon dioxide gas tanks for all SHG properties; it has now been categorized by hospital.

Section A8: Refrigerant Leakage Carbon Emissions (Scope 1)

Within our facilities, refrigerants are present in both refrigerators and air conditioning units, and the leakage from this equipment poses significant harm to the environment. To quantify the carbon emissions linked to refrigerant leakage, we received documentation from facility managers across all three hospitals. Whenever a refrigerant refill occurs, we record the amount refilled, assuming it equals the amount lost to the atmosphere. This information, combined with the GWP for each refrigerant, is then utilized in our calculations, which is the same as the anesthetic gas one but without density conversion as the data is already in weight-based measurements.

Our GWPs come from the California Air Resources Board (CARB). The reason why we use this instead of AR6 is because it has the GWPs for blended chlorofluorocarbons, whereas the AR6 does not have GWPs for blended.

https://ww2.arb.ca.gov/resources/documents/high-gwp-refrigerants

Section A9: Metered-Dose Inhalers (MDIs) Carbon Emissions (Scope 1)

Metered Dose Inhalers (MDIs) play a crucial role in asthma treatment. The propellants in MDIs often contribute to global warming when used. Finding GWPs for MDIs was challenging. After extensive research, the most reasonable and comprehensive source identified was the U.K. PresQIPP database. No equivalent U.S. publication was found during the search. We matched British inhaler models with our U.S. counterparts.

For the calculation, we received monthly data of the number of puffs administered by inhaler type from our Pharmacy department. Using this information, along with corresponding GWP and density data, we calculated carbon emissions monthly for each inhaler type, then added all inhalers together.

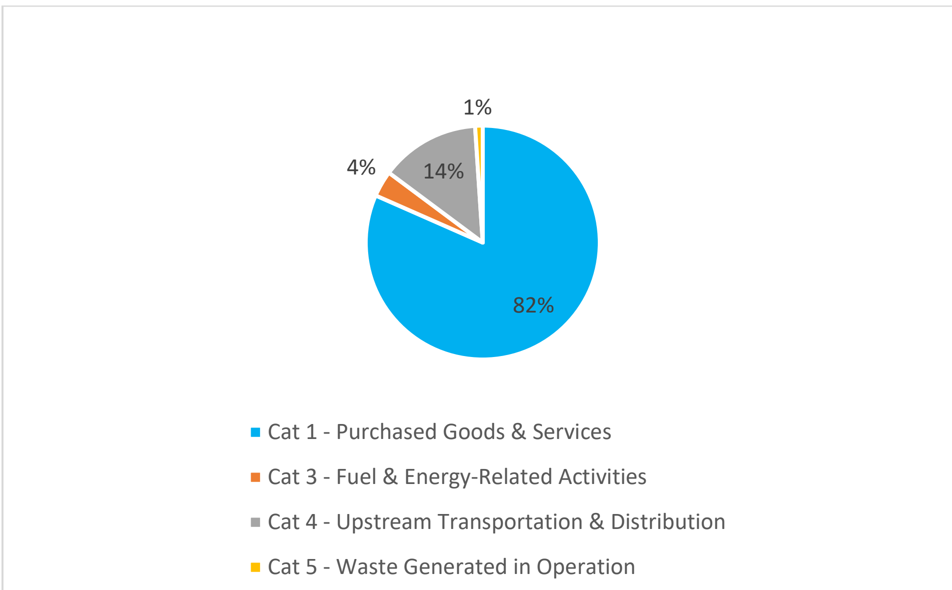
$$\frac{Puffs\ Adminstered * GWP\ g/CO2e}{1{,}000{,}000\ g/tons} = MDI\ CO2e\ tons$$

Appendix B

This appendix serves as a reference detailing the methodology for collecting our raw data for Scope 3 emissions and the subsequent conversion into carbon dioxide equivalents.

Figure 1 provides breakdown for Scope 3 emissions in 2024. Southcoast Health collected 4 categories that are the most relevant to us and have data available. We plan on adding more Scope 3 categories in future years, such as Business Travel, Upstream Leased Assets, etc.

Figure 1. 2024 Scope 3 Emissions



Section B1: Terms & Definitions

Primary Data: Data that consists of information provided by suppliers or other value chain partners, related to specific activities within the reporting organization's value chain. This data may include emissions data calculated by vendors based on their specific activities.

Secondary Data: Data that encompasses industry-average data (e.g., from published databases, government statistics, literature studies, industry associations), financial data, proxy data, and other generic information. We always look for primary data first when collecting Scope 3 emissions.

Proxy Data: Data that can be extrapolated, scaled up, or customized to better represent a given activity. For instance, if we collect data on 80% of our purchased goods' Scope 3 carbon emissions, we can assume that the remaining 20% have the same average emissions factor to fill the gap.

Market-Based Scope 2 GHG Emissions: the indirect greenhouse gas emission associated with purchased electricity, steam, heat, or cooling, calculated based on specific energy contracts or agreements that a company has in place. This differs from location-based, which uses grid-average emission factors.

Section B2: Category 1 – Purchased Goods & Services

This category includes all upstream emissions from purchased goods (tangible products) and services (intangible products). Southcoast Health gathered 2024 spending breakdown by all our vendors. We used the following 1A and 1B methodologies to gather our Category 1 Emissions Data for our top 45 vendors by spend (which consisted 71% of our annual spending).

1A: Vendors that have publicly available Scope 1, 2, and 3 Data

The methodology proposed aims to allocate carbon emissions to buyers in proportion to their spending on a vendor. This approach ensures that every buyer is accountable for the same amount of carbon emissions per dollar spent.

As sustainability becomes increasingly critical, some vendors now report their Scope 1, 2, and 3 emissions in their sustainability reports. We reviewed the websites of our top 45 vendors to identify those who disclose their Scope 1, 2, & 3 emissions.

For vendors that provide relevant emissions data, we aggregated their reported emissions and refer to their financial reports to obtain their total revenue. By dividing the total emissions by the total revenue, we calculated the carbon emissions factor (metric ton CO2 per dollar). We then multiplied this emission factor by our annual spending with each specific vendor to determine the amount of carbon emissions for which we are responsible.

<u>Example</u>

For 2024 our largest vendor was McKesson, with an expenditure of approximately $135.8 million. Their impact report provides the following emissions data (Table 1):

Table 1 McKesson Carbon Emissions

GHG Emissions in Metric Tons	**2024**
Scope 1	79,848
Scope 2 (market-based)	152,129
Scope 3, Category 1	31,925,992
Scope 3, Category 3	69,675
Scope 3, Category 4	398,635
Scope 3, Category 5	11,271
Scope 3, Category 6 (Business Travel)	13,598
Scope 3, Category 7 (Employee Commuting)	99,295
Total	32,750,443

We also found that McKesson's 2024 report indicates an annual revenue of approximately $309 billion. Using this data, we follow the steps below to calculate our allocation of carbon emissions.

$$Emission\ Factor = \frac{Total\ Emissions}{Total\ Revenue}$$

$$Southcoast\ Responsible\ Emissions = Emission\ Factor * Southcoast\ Annual\ Spend$$

Southcoast's responsible emissions for McKesson equaled approximately 14397.18 metric tons CO2e.

1B: Vendors that do not have publicly available Scope 1, 2, and 3 data

Since some of our vendors did not disclose their carbon emissions, we used secondary data to fill the gap. We chose to use the widely used US Environmentally Extended Input-Output (EEIO) data. Specifically, within the US EEIO data, we picked the 'Supply Chain

Emission Factors for US Industries & Commodities,' which align with the Category 1 emission factor definition. This data combines both environmental and economic information to determine the per dollar carbon emissions for specific industries.

The supply chain industry emission factors are classified by NAICS 6-digit industry codes. First, we identified our vendors' 6-digit industry codes and then located the corresponding supply chain emission factors. These emission factors indicate the average emissions per dollar for a specific of industry, regardless of the company. We then multiply the emission factor by the amount spent with each supplier to calculate the carbon emissions we are responsible for. The last step is to adjust the emissions for inflation using the Consumer Price Index (CPI), since the dollar value diminishes with inflation, and accordingly, the carbon emissions corresponding to the dollar value also decrease.

Example

For CY 2024, one of our largest vendors was FFF Enterprises, with expenditures of approximately $11.88 million. Since FFF does not report their carbon emissions, we used industry-specific emission factors to estimate their emissions. We identified FFF's NAICS code as 424210 (see Image 1). To find the corresponding supply chain emission factors, we used the most recent year available, 2017, from detailed industry data in the US EEIO database.

Since the 2017 detailed commodity data was based on 2019-dollar values, we needed to adjust for inflation because the same amount of dollars spent in 2024 has less purchasing power than in 2019, meaning fewer goods and services were purchased for the same amount. We used the Consumer Price Index (CPI), where the CPI value for December 2018 was 255.7 and December 2024 was 314.4. We used the ration of these CPI values to adjust the carbon emissions we are responsible for.

$$Southcoast\ Responsible\ Emissions = (Emission\ Factor * Southcoast\ Annual\ Spend) * \left(\frac{December\ 2018\ CPI}{December\ 2024\ CPI}\right)$$

For vendors without emission factors linked to their NAICS codes, we applied the average of vendors that had emission factors linked to their NAICS codes.

Image 1. FFF Enterprises NAICS Code

Unique Site ID: 19-746-8465 - Archived Record	
Company Name: Fff Enterprises Inc	**Tradestyle:**
Top Contact: Restricted	**Title:** Restricted
Street Address: 44000 Winchester Rd, Temecula CA 92590	
Phone: Restricted	
Total Emps: 380	**Emps On Site:** 380
Sales Volume: $1,600,000,000	
Public/Private: Public	**Year Started:** 1988
Lat: 33.5155525	**Long:** -117.1854866
NAICS 1: 424210	Drugs and Druggists' Sundries Merchant Wholesalers
NAICS 2:	
SIC 1: 51220308	Pharmaceuticals
SIC 2:	
Number of Locations: 3	
Date of Report: 2018-09-06	

1C: Combining Carbon Emissions Data

We combined all carbon emission data for our top suppliers using 1A and 1B methods, resulting in 49,107 tons. As these 45 suppliers represent 71% of our total CY24 spending, we scaled this up to 100% assuming the remaining vendors have the same emission factors.

$$Scope\ 3\ Category\ 1\ Emissions = (1A\ Emissions + 1B\ Emissions) + (Remaining\ Spend * Avg\ 1A\ \&\ 1B\ Emission\ Factor)$$

Section B3: Category 3 – Fuel & Energy-Related Activities

This category includes all emissions related to fuel and energy, excluding the combustion part of the energy, which is already included in our Scope 1 and 2 emissions. Specifically, for Southcoast, our Category 3 emissions pertain to upstream carbon emissions related to electricity and natural gas. This includes the extraction, production, and transportation, which is called 'well-to-tank' (WTT), of fuels. For electricity, there is an additional transmission and distribution (T&D) loss.

We did not include natural gas T&D loss because it is already accounted for in our Scope 1 emissions. This is evidenced by our natural gas bills, which always include line loss when calculating our natural gas consumption basis.

As our utility suppliers do not report upstream emission factors, we follow the GHG Protocol and use secondary data. A widely used data source is from the UK Government, which has all emission factors we need to include in Category 3.

Greenhouse gas reporting: conversion factors 2024 - GOV.UK

Example

The UK report has all emission factors in kWh, so we calculated unit conversion for natural gas. Last year, Southcoast consumed 58 million kWh of natural gas and 34 million kWh of electricity.

As the US uses Gross CV, the WTT emission factor for natural gas falls under 0.03021 kg CO2e.

The T&D lost emission factor for electricity falls under 0.0183 kg CO2e and WTT emission factor for electricity was 0.024935 kg CO2e. Note that the WTT emission factor includes both electricity we consume on site and electricity lost during T&D.

$$WTT\ Emissons\ for\ Natural\ Gas = WTT\ Emission\ Factor\ for\ Natural\ Gas * Annual\ Consumption$$

$$T\&D\ Emissions\ for\ Elecricity = T\&D\ Emission\ Factor\ for\ Electricity * Annual\ Consumption$$

$$WTT\ Emissions\ for\ Electricity = WTT\ Emission\ Factor\ for\ Electricity * Annual\ Consumption$$

$$Scope\ 3\ Category\ 3\ Emissions = WTT\ Emissions\ for\ Natural\ Gas + T\&D\ Emissions\ for\ Electricity + WTT\ Emissions\ for\ Electrictiy$$

Section B4: Category 4 – Upstream Transportation & Distribution

This category pertains to the upstream transportation of the products we purchase, specifically emissions from the factory to Southcoast. This is known as the ‘Gate-to-Gate’ emissions factor and corresponds to the ‘Margins of Supply Chain Emission Factors’ within the EEIO data described in Category 1, Method 1B. We used the same calculation methodology as in 1B for this category.

For vendors without emission factors linked to their NAICS codes, we applied the average of vendors that had emission factors linked to their NAICS codes.

Note: there are no upstream transportation emissions for our service vendors.

Section B5: Waste Generated in Operation

This category measures the emissions generated related to the waste we produce daily. It includes emissions from transportation from our facility to the waste disposal facility, emissions related to sorting, the equipment used at the facility, and the actual disposal process emissions.

We obtain our annual waste pickup tonnage from different vendors (Table 2), which includes six different types of waste streams. Since our waste haulers do not have their own emission factors, we use secondary data to fill this gap. For this, we use the US EPA GHG Emission Factors Hub.

To effectively use this table, we need to know the disposal method for each waste stream and the type of waste generated. By contacting our vendors, we obtained information on the disposal methods. Additionally, since we do not have a percentage composition of our mixed solid waste streams, we use the 'Mixed MSW' as this material type.

Example

In this example, we calculate the emissions related to the Mixed Solid Waste (MSW) we generated in CY2024. We produced 772.9 tons of MSW at St. Luke's. Since we know that our MSW is 100% combusted, we used the corresponding EPA emissions factors or Mixed MSW: 0.43 for combusted. Note that these units are in tons of CO2e per short ton of waste. Therefore, we needed to convert our waste generated from ton to short tons using a conversion factor of 1.1 short tons per ton.

$$Amount\ Generated\ to\ Combustion = MSW\ total * Short\ Ton\ Conversion\ Factor$$

$$MSW\ Emissions = Amount\ Generated\ to\ Combustion * Combustion\ Emission\ Factor$$

Table 3 provides a detailed breakdown of carbon emissions for each waste stream.

Table 3. Breakdown of Category 5 Emissions by Waste Stream

Waste Stream Type & Disposal	**CO2e Tons**
Mixed Solid Waste - Combustion	811
Cardboard & Mixed Recyclables - Recycling	34
Regulated Medical Waste - Combustion	84
Hazardous Waste - Combustion	3
Pharma Waste - Combustion	2
Universal Waste - Recycled	>1
Paper Documents - Recycled	2
Total	939

Appendix C

Preparation for More Vulnerable Community

1. Southcoast Leadership will assess weather conditions to determine their severity and anticipated duration.

2. Collaborate with our internal team to de-identify patients residing in vulnerable communities by cross-referencing their addresses with the list of identified vulnerable communities.

3. Determine the specific medication and supplies required by these de-identified patients on a regular basis. Calculate the necessary quantities based on the severity and expected duration of severe weather events.

4. Procure the identified medications and supplies exclusively for vulnerable communities and ensure proper storage.

5. Distribute the medications to patients when they visit the hospital before, during, and after severe weather events.

6. Following severe weather events, assess the remaining medication and supplies and adjust future orders accordingly to minimize excess inventory.

Appendix D

Climate resilience plan for continuous Hospital operations:

1. Wind Endurance: Our hospitals are designed to withstand winds of at least 75 mph.

2. Power Reliability: We maintain two independent electrical feeds as redundant power sources. In the event of both feeds being disrupted, we have backup generators fueled by diesel stored in tanks, ensuring a minimum of 96 hours of sustained power. Regular weekly testing of generators is a part of our operational protocol.

3. Natural Gas Resilience: If natural gas supply is compromised, our boilers can seamlessly switch to heating oil stored in on-site tanks across all our hospitals. The stored heating oil is sufficient for a minimum of 96 hours.

4. Water Security: Our hospitals are equipped with multiple cross-connected water feeds. In the event of a complete water loss, contingency plans involve the use of large tanker trucks to replenish boiler water and the provision of buckets for toilet flushing. Additionally, we store a minimum of 96 hours' worth of drinking water for patients and dehydrated food in specified areas.

5. Food Sustainability: Each hospital maintains a reserve of dehydrated food, adequate for all patients, with an expiration date set 50 years in the future.

6. Heat Wave Preparedness: Anticipating heat waves exceeding 90 degrees, our HVAC team proactively adjusts the HVAC systems for efficient cooling.

7. Extreme Weather Drills: Annually, our Office of Emergency Management conducts at least two drills in each of our hospitals in collaboration with our hospital partners, addressing various topics related to extreme weather events.

8. Our list of partners: Wareham Fire Department, Wareham Police Department, Wareham Emergency Management Agency, Wareham Health Department. Marion Fire Department, Onset Fire Department, UMass Dartmouth Nursing Program, Brewster Ambulance, & Wareham EMS.

In the case of severe weather, we follow Annex M & SP-1 for Stand-by, Activation, and Stand-Down Procedure.