

DirectViz Solutions, LLC Greenhouse Gas Inventory Report (2022)

Scope 1 & Scope 2 Emission Sources

Prepared by: Logan Cohen
On behalf of: DirectViz Solutions, LLC
According to: GHG Protocol Corporate Accounting and Reporting Standard (Scope 1 and 2)

Contact Information

Logan Cohen, LEED AP, ENV SP
The Go Green Post
thegogreenpost@gmail.com
(631) 767-0546
Commack, NY

I certify scope 1 and 2 GHG emissions were calculated in accordance with the GHG Protocol Corporate Accounting and Reporting Standard:



Signature

Logan Cohen

Name

September 13, 2023

Date

DirectViz Solutions, LLC: 2022 Scope 1 & 2 Emissions Summary

DirectViz Solutions, LLC 2022 Scope 1 & 2 Emissions	
Scope 1 Emission Sources	Market-Based Tons CO2e
Stationary Fuels	0
Mobile Fuels	0
Fugitive	0
Process	0
Scope 1 Total	0
Scope 2 Emission Sources	
Purchased Energy	0
Electricity	76.41
Steam	0
Chilled Water	0
Scope 2 Total	0
Total Scope 1 & 2 Emissions	76.41

Methodology

This report follows the Greenhouse Gas Protocol Corporate Standard. Activity data were reported by the company. Emission factors were pulled from the US EPA eGRID 2021 Summary Table and Global Warming Potential Values from the Greenhouse Gas Protocol. The Floor Area allocation method and US EPA Simplified GHG Emissions Calculator was used in place of electricity consumption data. The Screening Method from the EPA's "Greenhouse Gas Inventory Guidance Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression, & Industrial Gases" was used to determine materiality of HVAC fugitive emissions.

Organizational Boundary

As an office-based company, the only source of Scope 1 and 2 emissions are electricity used in company-leased office space and potential refrigerant leakage from HVAC equipment. Space heating is done via electric heating. There are no mobile or process emission sources owned or controlled by the company. The company has operational control over its office space, therefore this inventory will follow the operational control approach.

GHG List

The DirectViz Solutions, LLC greenhouse gas inventory includes emissions from three of the six major GHG gasses (there are no known sources of HFCs, PFCs, or SF6):

- CO2
- CH4
- N2O

Emissions Methodology Breakdown and Inventory

Scope 1: Direct Emissions

The emissions in Scope 1 come from Stationary Fuels, Mobile Fuels, Fugitive Emissions, and Process Emissions. These are emission sources for which the company is directly responsible as a result of emitting greenhouse gasses from company-owned or controlled sources.

Stationary Fuels

Description:

Emissions resulting from the combustion of fuels in stationary sources. Examples include oil used for heating in a furnace and natural gas used for cooking.

Emission Sources and Totals:

Stationary Emissions
0 Tons CO2e

Justification:

The company did not own or control any sources of stationary emissions in the reporting year. As an office-based company, there are few potential sources of stationary emissions. All heating for office space is done via electric heating.

Mobile Fuels

Description:

Emissions resulting from the combustion of fuels in mobile sources. Examples include diesel used in company-owned or operated vehicles and gasoline combusted in lawn equipment.

Emission Sources and Totals:

Mobile Emissions
0 Tons CO2e

Justification:

The company did not own or control any sources of mobile emissions in the reporting year.

Fugitive - Refrigerants

Description:

Emissions resulting from the accidental or deliberate release of refrigerant fluid from air conditioning, chillers, refrigerators, etc.

Emission Sources and Totals:

DirectViz Solutions, LLC Refrigerant Emissions
0 Tons CO ₂ e

Justification:

The office building the company is based in may have had accidental HVAC refrigerant leakage during the reporting year. The building was purchased by a new owner in July of 2023 and does not have a record of the previous year's refrigerant replacement data. Accordingly, refrigerant emissions leakage is estimated based on the Screening Method in the EPA Center for Corporate Climate Leadership's "Greenhouse Gas Inventory Guidance Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression, and Industrial Gases".

$$\text{Emissions from Operation} = C * (x/1000) * T$$

where:

C = refrigerant capacity of the pieces of equipment

x = annual leak rate in percent of capacity

T = time in years used during the reporting year

According to 2006 IPCC Guidelines for National Greenhouse Gas Inventories, an acceptable default value for "x", Operation Emissions, for "Residential and Commercial A/C including Heat Pumps" is 10% of capacity per year. The default range of capacity, "C", is 0.5-100 kg. It is recommended to take the upper bound when data is not otherwise available. According to the building landlord, the HVAC system uses the refrigerant R22, which has a Global Warming Potential (GWP) of 1760, as noted in "Global Warming Potential Values" by the Greenhouse Gas Protocol. This results in a range of refrigerant emissions from 0.09-17.6 tons. However, DirectViz Solutions, LLC operates in an office that is only 18,987 square feet of the building it operates in. The building contains two tall office buildings with a joint lobby, which totals 347,684 square feet. Regardless of the building boundary selected or the range of refrigerant capacity, the Screen Method shows the impact of refrigerants is under the material threshold of 5% and therefore does not need to be reported.

Process Emissions

Description:

Emissions resulting from the release of emissions from physical or chemical transformation.

Emission Sources and Totals:

DirectViz Solutions, LLC Process Emissions
0 Tons CO2e

Justification:

As an office-based company, there are no sources of process emissions.

Scope 2: Indirect Emissions

Scope 2 emissions result when a company purchases energy from another company, for example, from a utility company. The purchasing company is *indirectly* responsible for any emissions released because they do not own or control the energy generation equipment. Scope 2 includes Purchased Electricity, Purchased Steam, Purchased Chilled Water, and Purchased CoGeneration Power.

Purchased Electricity

Description:

Emissions resulting from the purchase of electricity from another company.

Emission Sources and Totals:

Location-Based: Purchased Electricity Emissions
76.41 Tons

Justification:

Location Based

The company is in the Northeast section of the continental United States. According to “The EPA Simplified GHG Emissions Calculator”, an office in the Northeast consumes 13.8 kWh per square foot per year. With an office space of 18,987 square feet, it’s estimated DirectViz Solutions, LLC consumed 262,020.60 kWh of electricity in 2022.

DirectViz Solutions, LLC is located in the SRVC grid region of the United States. According to eGRID, the emission factor of SRVC is 642.9 lbs/MWh, as of 2021. This results in 76.41 tons CO₂e.

Purchased Steam, Chilled Water, and CoGeneration

Description:

Emissions resulting from the purchase of steam, chilled water, or CoGeneration power from another company. Companies often purchase steam or chilled water for space heating and cooling. These impact areas have been grouped, as there are no anticipated sources for the company.

Emission Sources and Totals:

Purchased Steam, Chilled Water, and CoGeneration Emissions
0 Tons CO2e

Justification:

The company did not purchase steam, chilled water, or CoGeneration power in the reporting year.