SUSTAINABILITY REPORT

SCOPE 1 AND SCOPE 2 GREENHOUSE GAS EMMISSIONS 2022





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1. INTRODUCTION

CPS Professional Services, LLC dba CATHEXIS is a service disabled, veteran-owned small business (SDVOSB) management consulting and performance improvement company. On May 20, 2021 Executive Order (E.O.) 14030 directed for policy to be added to address climate related financial risk. In response to Section 5(b) of E.O. 14030, proposed changes to the Federal Acquisition Regulation (FAR) were published in 87 CFR 68312 to require certain Federal contractors to publicly disclose greenhouse gas (GHG) emissions and climate-related financial risk and to set science-based reduction targets. To meet the upcoming requirements, we conducted Scope 1 and Scope 2 GHG emissions inventory for 2022 to serve as a baseline. The Scope 1 and Scope 2 emissions inventory was calculated in accordance with the World Resources Institute (WRI) and the World Business Council for Sustainable Development's (WBCSD) Greenhouse Gas Protocol Corporate Accounting and Reporting Standard.

2. INVENTORY DETAILS

2.1. Organizational Boundary

The GHG Protocol requires companies to set an organizational boundary approach when constructing their GHG emissions inventory. The approaches available to consolidate GHG emissions include the equity share approach and the control approaches, operational or financial. It was determined that the operational control approach best reflects CATHEXIS' ownership structure. Under the operational control approach, the GHG Protocol requires a company to account for 100 percent of the GHG emissions from operations which it has the full operational control over – the authority to introduce and implement operating policies.

2.2. Reporting Period

The reporting period defined for CATHEXIS' inventory is January 1, 2022, to December 31, 2022.

2.3. Scopes

The baseline inventory conducted includes CATHEXIS' Scope 1 and Scope 2 emissions. Scope 1 emissions include emissions from sources that are owned or controlled by CATHEXIS. Scope 2 emissions include emissions associated with consumption of purchased energy. The table below details the Scopes, emission categories, and emission sources relevant and included in CATHEXIS' inventory.

Emissions Category	Description	Emission Source (Name in 2022 GHG Inventory)					
	CATHEXIS' Scope 1 Emissions						
Mobile Combustion	Stationary and Mobile combustion.	This category is not applicable to CATHEXIS					
	CATHEXIS' Scope 2	Emissions					
Purchased Electricity	Purchased electricity included in rented office space.	Electricity use from leased building space at 3190 Fairview Drive Falls Church, Virginia 22042					



2.4. Greenhouse Gases

The GHG Protocol has identified seven major GHGs regulated under the Kyoto Protocol that must be included in inventories – carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). The table below details all greenhouse gases relevant to CATHEXIS' operations included in the inventory.

Emissions Category	Greenhouse Gases						
	CO_2	CH ₄	N ₂ O	HFCs	PFCs	SF_6	NF ₃
Scope 1: Stationary and Mobile Combustion	X	X	X				
Scope 2: Purchased Energy and Heat	X	Х	X				

2.4.1. Global Warming Potential (GWP) Values

Greenhouse gases each have a defined global warming potential (GWP) which is used to calculate the carbon dioxide equivalent (CO₂e) of each greenhouse gas. The GWP represents how much heat that greenhouse gas can trap in the atmosphere compared to carbon dioxide. The GWPs for CATHEXIS' 2022 baseline inventory used are sourced from the Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report (AR6). It is best practice to use the same GWP values in future inventories as the base year inventory.

Greenhouse Gas	GWP		
CO_2	1		
CH ₄	29.8		
N ₂ O	265		

2.5. Facilities

In 2022, CATHEXIS leased office space at 3190 Fairview Drive Falls Church Virginia 22042.

3. EMISSION QUANTIFICATION METHODS

3.1. Scope 1 – Direct Emissions

This category is not applicable.

3.2. Scope 2 - Purchased Electricity - Location Based

Emission Sources

Electricity – leased office space at 3190 Fairview Drive Falls Church, Virginia 22042



Source Data

Individual invoices for CATHEXIS in KWh as well as portion electricity cost for the leased space. Spend based electricity use was converted to KWh using the average cost per KWh in the invoices and tenant percentage of 3.58%.

Calculation Approach

- ✓ Electricity use = Invoice use KWH + (Total building electricity cost * Tenant % * Average cost/KWh)
- ✓ CO₂ emissions = Total annual electricity consumed (kWh) x Emission Factor
- ✓ CH₄ emissions (CO₂e) = Total annual electricity consumed (kWh) x Emission Factor x GWP
- ✓ N₂O emissions (CO₂e) = Total annual electricity consumed (kWh) x Emission Factor x GWP

Source of Emission Factors

Electricity eGRID: SRVC CO₂: 623.1 lb CO₂/MWh CH₄: 0.05 lb CH₄/MWh N₂O: 0.007 lb N₂O/MWh

EPA Emission Factors for Greenhouse Gas Inventories, April 2022

Assumptions/Notes

- Tenant percentage is 3.58% in 2022
- Average cost per KWh is 0.116

Opportunities for Improvement in Data Quality

✓ Track actual electricity use through separate billing for all of CATHEXIS' use

4. SUMMARY OF GHG EMISSIONS

Total	CO ₂ (MT)	CH ₄ (MT)	N ₂ O (MT)	CO ₂ e (MT)
Scope 1	0.00	0.00E+00	0.00E+00	0.00
Scope 2	50.11	4.07E-03	5.48E-04	50.38
Total	50.11	4.07E-03	5.48E-04	50.38

Table of Scope 1 and Scope 2 Totals by Emissions Category; Sum of metric ton CO₂e, CO₂, CH₄, and N₂O