OBXtek Inc.

Greenhouse Gas Inventory Management Plan (Version 1.0)

Reporting Year: 2023

February 20, 2024

Document Revision History

Revision Number	Revision Date	Published By	Description of Revisions
1.0	02/20/24	OBXtek	Original version
2.0	12.2024	OBXtek	Revised to add missing goals

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Attachments

Acronyms

AR6	Intergovernmental Panel on Climate Change Sixth Assessment Report
CBECS	U.S. EIA Commercial Buildings Energy Consumption Survey
CCAR	California Climate Action Registry
CH4	Methane
CL	Checklist
COP	Coefficient of Performance
CO2	carbon dioxide
DEFRA	United Kingdom Department for Environment, Food & Rural Affairs
ESG	Environmental, Social, & Governance
GHG	Greenhouse gas emissions
GRI	Global Reporting Initiative
GWP	Global Warming Potential
HVAC	Heating, Ventilation, and Air Conditioning
IEA	International Energy Agency
IMP	Inventory Management Plan
ISAE	International Standard for Assurance Engagements
ISO	International Organization for Standardization
kWh	Kilowatt-hour(s)
Lbs	Pound(s)
MMBtu	One million British Thermal Units
MWh	Megawatt-hour(s)
MT	Metric Ton
N20	nitrous oxide
OFI	Opportunity for Improvement
PPA	Power Purchase Agreement
QA/QC	Quality Assurance/Quality Control
REC	Renewable Energy Certificates
RY	Reporting Year
RFI	Request for Information
SASB	Sustainability Accounting Standards Board
U.S.	United States of America
U.S. EIA	United States Energy Information Administration
U.S. EPA	United States Environmental Protection Agency
VMT	Vehicle Miles Traveled
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute

Definitions

Base year
A historic datum (a specific year or an average over multiple years) against which a company's emissions are tracked over time.

Base year emissions
Greenhouse Gas (GHG) emissions in the base year.

Base year emissions recalculation/adjustment
Base year emissions recalculation reflects a change in the structure of the company or to reflect a change in the accounting methodology used. This ensures data consistency over time, i.e., comparisons of like with like over time.

Boundaries
GHG accounting and reporting boundaries can have several dimensions, i.e., organizational, operational, geographic, business unit, and target boundaries. The inventory boundary determines which emissions are accounted for and reported by the company.

Control
The ability of a company to direct the policies of another operation. More specifically, it is defined as either operational control (the organization or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation) or financial control (the organization has the ability to direct the financial and operating policies of the operation with a view to gaining economic benefits from its activities).

CO2 equivalent (CO2e)
The universal unit of measurement indicating the global warming potential (GWP) of each of the seven GHGs, expressed in terms of the GWP of one unit of carbon dioxide. It is used to evaluate releasing (or avoiding releasing) different GHGs on a common basis.

De minimis emissions
A level below which emissions are not included. For example, a de minimis source might include any emission sources that, in total, represent less than 5% of an organization's total GHG emissions.

Direct GHG emissions
Emissions from sources that are owned or controlled by the reporting company.

Emission factor
A factor allowing GHG emissions to be estimated from a unit of available activity data (e.g., tons of fuel consumed, tons of product produced) and absolute GHG emissions.

Fugitive emissions
Emissions that are not physically controlled but result from the intentional or unintentional releases of GHGs. They commonly arise from the production, processing transmission storage, and use of fuels and other chemicals, often through joints, seals, packing, gaskets, etc.

Greenhouse gases (GHG)
For the purposes of this standard, GHGs are the seven gases listed in the Kyoto Protocol: carbon dioxide

(CO2); methane (CH4); nitrous oxide (N2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulfur hexafluoride (SF6); and nitrogen trifluoride (NF3).

Global warming potential (GWP)
A factor describing the radiative forcing impact (degree of harm to the atmosphere) of one unit of a given GHG relative to one unit of CO2.

Indirect emissions
Emissions that are a consequence of the operations of the reporting company but occur at sources owned or controlled by another company.

Inventory boundary
An imaginary line that encompasses the direct and indirect emissions that are included in the inventory. It results from the chosen organizational and operational boundaries.

Mobile combustion
Burning of fuels by transportation technologies such as cars, trucks, airplanes, ships, etc.

Opportunity for improvement
A requirement has been effectively implemented but additional effectiveness of robustness may still be attainable.

Organizational boundaries
The boundaries that determine the operations owned or controlled by the reporting company, depending on the consolidation approach taken (equity or control approach).

Scope
Defines the operational boundaries in relation to indirect and direct GHG emissions.

Scope 1 inventory
A reporting organization's direct GHG emissions.

Scope 2 inventory
A reporting organization's emissions associated with the generation of electricity, heating/ cooling, or steam purchased for own consumption.

Scope 3 inventory
The result of activities from assets not owned or controlled by the reporting organization, but that the organization indirectly impacts in its value/supply chain.

Stationary combustion
Burning of fuels to generate electricity, steam, heat, or power in stationary equipment such as boilers, furnaces, etc.

Structural change
A change in the organizational or operational boundaries of a company that result in the transfer of ownership or control of emissions from one company to another. Structural changes usually result from a transfer of ownership of emissions, such as mergers, acquisitions, and divestitures, but can also include outsourcing/insourcing.

Verification
An independent assessment of the reliability (considering completeness and accuracy) of a GHG inventory.

Introduction, Scope, and Purpose

From our inception on North Carolina's Outer Banks to today, OBXtek has been determined to offer superior customer service while developing innovative technical solutions that address the Federal Government's toughest challenges. We provide Information Technology Engineering and Support, Program and Acquisition Management, Software Development, Testing, and Information Security services to the Federal Government.

OBXtek pairs lessons learned across disciplines with industry standard quality practices - we're CMMI-Dev Level III, ITIL, 6Sigma, PMI, and ISO 9001, ISO 20000, and ISO 27001 certified - to create processes that underpin the creation of novel, successful results.

Business Information (CL 1-4)

OBXtek Inc.
Corporate Headquarters
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Company Contact/Inventory Manager

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Data Year

Baseline & Data Year: CY2022: January 1, 2022 –December 31, 2022

Organizational Boundary Definition (CL 5)

OBXtek defines its GHG inventory organizational boundaries using the Operational Control Approach. All facilities over which OBXtek has operational control are included in the GHG inventory. This includes the leased facility that OBXtek occupies, and all vehicles that the business operates. For any portion of leased facilities that operate under full-service leases, where the building owner pays the utilities directly and OBXtek does not have access to energy consumption information, OBXtek will estimate the energy consumption and include these facilities in its definition of operational control. Any space that OBXtek leases or sub-leases to other tenants is considered outside of OBXtek's operational control and is excluded from the inventory.

Facilities List (CL 6)

The organizational boundary consists of the leased facility of OBXtek.

OBXtek's facility list is generated and maintained by OBXtek's Inventory Manager, Aaron Drabkin.

Greenhouse Gases List (CL 7)

The Kyoto Protocol establishes seven major GHGs: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), nitrogen trifluoride (NF_3), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). The GHG Protocol requires that companies include the seven Kyoto gases in

their assessment of operational boundaries (WRI and WBCSD, 2013). OBXtek does not have any NF_3, SF_6, or PFC emissions from its operations, therefore only four of the seven Kyoto gases are included in its inventory. The inventory includes carbon dioxide, methane, and nitrous oxide emissions principally from purchased electricity use, as well as from mobile fuel consumption in company-leased vehicles. Hydrofluorocarbons from estimated HVAC (heating, ventilation, and air conditioning) systems are also included in the inventory.

Emission Source Identification Procedure (CL 8)

The emission source identification for OBXtek was undertaken collaboratively by the OBXtek Inventory Manager, Aaron Drabkin, as well as along with Apex consultants, Slok Gyawali and Lorianne Esturas. This inventory makes a good-faith effort to meet the completeness principle highlighted in the GHGP. However, where exclusions or estimations were necessary, OBXtek meets the transparency principle by highlighting specific exclusions and providing appropriate justifications as recommended in the GHGP.

Base year data collection focused on developing a comprehensive inventory of OBXtek properties and associated emissions sources. The facilities list and facility information were compiled by the OBXtek Inventory Manager.

Emission sources were validated by querying facility staff utilizing a Request for Information (RFI) document. The RFI is a checklist-style document where facility contact(s) indicate which sources are present at a given site. In future years the GHG inventory model will be reviewed and updated. Fleet and facility managers will be interviewed by the Inventory Manager to determine if new facilities, fuels, vehicles, or other emission sources need to be included in the inventory model.

Scope 1 Direct Sources (CL 9)

Scope 1 direct sources include those with GHG emissions from OBXtek-owned or operated equipment and facilities that have been deemed to fall within the inventory boundary using an Operational Control Approach. Scope 1 sources of emissions for OBXtek are identified by fuel type or fugitive emission gas type in **Table 1** below.

Table 1. Scope 1 Direct Sources Included in the OBXtek GHG Inventory

	Fuel/Gas	Emissions Sources	Relevant Business Unit(s)
SCOPE 1 – Stationary Combustion	Natural Gas	N/A	
	R-134A	Offices – Space Cooling, AC Units (estimated)	R-134A
	Distillate Fuel Oil (Diesel)	N/A	
	Propane	N/A	
	Solar	N/A	

	Fuel/Gas	Emissions Sources	Relevant Business Unit(s)
SCOPE 1 – Mobile Combustion	Gasoline	Leased vehicle	
	Diesel	N/A	
	Propane	N/A	

Scope 2 Indirect Sources (CL 10)

Scope 2 indirect sources include emissions from purchased energy, such as electricity, steam, hot water, or chilled water. Data sources for purchased electricity originate from utility invoices that document monthly consumption. These invoices are aggregated at the facility level for entry into the GHG inventory model. Utility bills are aggregated by the Inventory Manager for all sites. Scope 2 sources of emissions for OBXtek are identified by energy type in **Table 2** below.

Table 2. Scope 2 Indirect Sources Included in the OBXtek GHG Inventory by Business Unit

Energy Source	Emissions Sources	Relevant Business Unit(s)
Purchased Electricity	Lighting, Cooling, Heating, Mechanical Systems	All
Purchased Chilled Water	N/A	N/A
Purchased Hot Water	N/A	N/A
Purchased Steam	N/A	N/A
Purchased Compressed Air	N/A	N/A
Purchased Geothermal Energy	N/A	N/A

Renewable Energy Certificates, Green Power, and Offsets (CL 12-13)

OBXtek does not currently utilize any green electricity products (PPA, VPPA, green tariff), nor does it purchase Renewable Energy Certificates (RECs) or Guarantees of Origin (GOs) to reduce its Scope 2 market based GHG emissions. Additionally, it does not purchase carbon offsets to reduce any portion of its Scope 1 emissions.

Data Management (CL 17 & 22)

All GHG emissions will be calculated in the GHG inventory model using emission quantification methodologies according to the requirements of the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol's *A Corporate Accounting and Reporting Standard, 2004 revised edition* (The GHG Protocol)[1] and, where applicable, the U.S. EPA's *Greenhouse Gases Reporting Program*. Inventory development will be centralized through OBXtek's Chief Compliance Officer (CCO) who will ensure that the inventory information is maintained and updated at least annually. Apex Companies provides advisory services related to the preparation of the inventory.

All emission factors in the inventory should be updated regularly by reviewing any revisions to appropriate emission factor guidance documents. Default emission factors for certain fugitive and

[1] WRI/WBCSD GHG Protocol Initiative. (2004, March). A Corporate Accounting and Reporting Standard (revised edition). Retrieved from: http://www.ghgprotocol.org/sites/default/files/ghgp/standards/ghg-protocol-revised.pdf

venting emission sources should be replaced with OBXtek-specific factors, if possible, based on measured data supplied by OBXtek's refrigerant maintenance consultants. If the OBXtek-specific factors have a significant impact on emission levels compared to using the default factors, then they should be applied retroactively to the base year (CL 22).

Data Collection Process – Activity Data Collection (CL 16)

OBXtek's CCO initiates the inventory data collection process and submits the inventory to OBXtek's Quality Manager for review and recommendations prior to briefing OBXtek Senior Management. Briefings to OBXtek Senior Management serve as a regular forum for education and coordination around greenhouse gas inventory management best practices, as well as eventual publication of the inventory. OBXtek facility information can be found in **Appendix A – List of Facilities Within OBXtek Inventory.**

OBXtek collects all data annually (CL 22). **Appendix B - Direct and Indirect Emission Activity Data within OBXtek Inventory** provides details on the source of activity data, and the process for collecting and estimating the activity data. OBXtek updates this table annually as data acquisition procedures or estimation methodologies change over time.

Each OBXtek Annual GHG Inventory model details the annual activity data and associated emissions for each asset for the associated year.

The next section describes OBXtek's process for filling data gaps and calculating estimates in more detail.

Estimation Methodology (CL 17-18)

The GHG protocol does not recommend a *de minimis* emission level or materiality threshold on the basis of which a source could be excluded from the inventory. In conforming with this approach and the completeness principle that is also part of the GHG Protocol, OBXtek has made a good-faith effort to quantify all sources of emissions within its boundaries. The process of collecting data revealed some emission sources for which activity data is not available or not collected. OBXtek uses several methodologies to develop an estimate of the resulting emissions to be included in the inventory where necessary. The GHG inventory model maintains a record of each activity data value as actual or estimated.

For the baseline year, estimated GHG emissions account for 98% of OBXtek total inventory emissions.

The GHG inventory model also contains a breakdown of estimated emissions for the associated year.

Electricity and Natural Gas

Estimates are only made if no data is available for electricity and natural gas. These estimates are performed by the Inventory Manager. Most of the estimates in OBXtek's inventory are associated with leased offices for which OBXtek has data on the square footage of the facility. For these assets, OBXtek estimates activity data based on data from benchmark intensity information at other similar-type assets, other proxy data, or based on the United States Energy Information Administration's (U.S. EIA's)

Commercial Buildings Energy Consumption Survey (CBECS) metrics.[2] The benchmark intensities are then applied to the square footage from each asset.

Natural gas consumption is not included within the OBXtek as OBXtek does not hold operational control over its leased facility space.

WHOLE-YEAR DATA ESTIMATION

Where electricity data are unavailable, emissions are estimated in the inventory model using energy use intensities (EUI) (energy consumption per square foot) from the U.S. EIA's CBECS. For the initial inventory, preliminary CBECS 2018 EUIs have been loaded into the inventory model. The CBECS data being used in the current inventory can be found in **Appendix C – Commercial Building Energy Consumption (CBECS) 2018 Data**.

DATA GAPS OR PARTIAL DATA ESTIMATION

Where electricity data is incomplete for the inventory year and best efforts to retrieve primary data (such as a utility invoice) are unsuccessful, emissions are estimated in the inventory model using the following data hierarchy:

1. When sites have two or more monthly invoices within the inventory timeframe, the average of all months with invoiced values is applied to each month without invoicing data.

2. When sites have only one invoiced month within the inventory timeframe, the whole-year data estimation explained above is used to estimate consumption.

Other Fuels (Diesel and Propane)

For the 2023 OBXtek GHG Inventory, limited data was available for site-level use of propane or diesel. An opportunity for improvement (OFI) in future years is to track and report on the use of those fuels utilizing primary data, where applicable.

Refrigerants

For the 2023 OBXtek GHG Inventory, no data was available for site-level use of refrigerants. An opportunity for improvement (OFI) in future years is to track and report on the use of those fuels utilizing primary data, where applicable. Information related to global warming potential (GWP) values used in this inventory can be found in the **Emissions Quantification and Calculation Methodologies** section below.

Data Collection Process – Quality Assurance/Quality Control (CL 18)

OBXtek's inventory data goes through a rigorous QA/QC process to ensure that all data are consistent and accurate from year to year. The QA/QC process identifies uncertainties or errors in the data and provides a platform from which the Inventory Manager can collaborate with facility/data contacts to better understand data sources and mitigate any data issues before the GHG inventory is finalized. OBXtek works with Apex companies to ensure that all data are consistent and accurate. Before the inventory is finalized a senior staff member from Apex conducts a technical review of the IMP and the GHG inventory model.

[2] U.S. EIA (2018). 2018 CBECS Survey Data. Retrieved from https://www.eia.gov/consumption/commercial/data/2018/index.php?view=consumption

A technical review is conducted by Apex personnel who are qualified as Lead Assuror for all engagement types (some lead assurors may only be qualified for certain types of operations or engagements). Qualifications to conduct a technical review include a working knowledge of the requirements of ISO 14064-3:2019 Greenhouse gases – Part 3: Specification with guidance for the verification and validation of greenhouse gas statements, ISAE 3000, the relative reporting framework (e.g., GHG Protocol, GRI, SASB), and the sector of the reporting entity (type of company and operations). To minimize bias, technical reviewers do not have a functional role in any inventory development processes. The technical reviewer's role is to perform an objective evaluation of the significant judgments made by the inventory development team, and the conclusions reached in formulating the calculations. Potential sources of uncertainty and QA/QC checks include the following:

- Addition of new sources or facilities;
- Removal of previous sources or facilities;
- Large year-over-year changes in individual facility or source data or emissions;
- Errors in electricity and fuel supplier invoices;
- Transcription errors in entering or transferring data from invoices to the inventory model;
- Ensuring the activity data is in or converted to, the correct units of measure and that these are consistent with the units required for input into the inventory model; and
- Emission factor changes.

Data Collection System Security (CL 19)

The OBXtek CCO and Quality Manager have full access to the inventory and primary control over the data collection process and system security. All other access to the OBXtek inventory is read-only with no editing privileges.

Integrated Tools (CL 20)

At present, OBXtek does not have an integrated platform for tracking companywide GHG emissions sources on an ongoing basis. To ensure proper collection of data on an annual basis, the Inventory Manager collects data from a variety of sources within OBXtek and currently maintains records of emissions sources within the organization across several files that ultimately feed up into the GHG inventory spreadsheet. Fleet fuel use data is pulled from fleet vehicle records, site-level energy consumption is provided by the facilities via quarterly reporting to OBXtek corporate via OBXtek's Insight EHS tracking system. Updates to OBXtek's portfolio of buildings are requested annually by the Inventory Manager to the building landlord, and square footage, building characteristics, and location are updated annually.

Inventory Frequency (CL 21)

OBXtek's GHG inventory is aggregated on a calendar year basis. Data collection frequency for emissions sources varies. Generally, electricity and natural gas are reported on an annual basis while other facility emissions source data (e.g., mobile combustion) is collected on an interval basis (monthly or quarterly). Because most data are tracked annually or on a shorter interval basis (monthly), the inventory should be updated annually.

Emissions Quantification and Calculation Methodologies (CL 14-15)

Carbon Dioxide Equivalents

GHG emissions are reported throughout this document in metric tons of CO2 equivalents (CO2e). Because individual GHGs have different impacts on climate change or global warming, the use of CO2e expresses the impact of emissions from each GHG type on a common scale.

The emissions calculations described in the **Scope 1 Direct Emission Sources** and **Scope 2 Indirect Emission Sources** sections of this document (once converted from grams to metric tons) provide CO_2, CH_4, and N_2O emissions in metric tons. To aggregate all gases into a single emissions value, CH_4 and N_2O gases must be converted to CO2e by multiplying times the appropriate GWP. GWPs for this inventory have been sourced from the Intergovernmental Panel on Climate Change (IPCC) *Sixth Assessment Report* (AR6). The primary GWPs used in OBXtek's inventory can be found in **Table 3. Primary GWP for GHGs included in the OBXtek Inventory**. Appendix **D – Global Warming Potentials** lists GWPs for refrigerants and other gases in the inventory.

Table 3. Primary Global Warming Potentials (GWP) for GHGs included in the OBXtek Inventory (CL 7)[3]

Greenhouse Gas	100-Year GWP
CO_2	1
CH_4 fossil-origin	29.8
N_2O	273

To calculate emissions, the annual consumption of each fuel or emissions source is collected by the Inventory Manager and then multiplied by an emission factor and GWP for each of the relevant GHGs. This methodology is outlined in the next section.

Scope 1 Direct Emission Sources

Mobile Fuels Combustion

This emission source consists of all the vehicles in the OBXtek fleet. OBXtek has vehicles that are fueled by gasoline, diesel, and/or ethanol.

Relevant GHGs for mobile fuel combustion include CO_2, CH_4, and N_2O. The calculation for mobile fuel combustion mirrors that for stationary combustion, where the total fuel consumption for each fuel type is multiplied by an emission factor and corresponding GWP, as shown in Equation 2 below. If fuel consumption data is not available, then annual vehicle miles traveled (VMT) data can be used to estimate fuel consumption.

Equation 2:

[3] International Panel on Climate Change (IPCC). (2022). Sixth Assessment Report (AR6) Global Warming Potentials (GWPs).

$$GHG_{total} = \sum_{i=1}^{n} (Fuel_i * EF_{CO2}) + (Fuel_i * EF_{CH4} * GWP_{CH4}) + (Fuel_i * EF_{N2O} * GWP_{N2O})$$

where:

GHG_{total} = Total GHG Emissions in CO_2e
$Fuel_i$ = Annual Consumption of Fuel Type combusted
EF = Emission Factors
GWP = Global Warming Potentials

Fugitive Refrigerant Emissions

Fugitive refrigerant emissions leak or are released from pressurized equipment such as building air conditioning units and fire extinguishers. A mass balance equation (Equation 3) is used to quantify the amount of gas leaked from HVAC equipment where data is available. Where data are not available, HVAC fugitive emissions are estimated using HVAC industry standards, U.S. EPA loss standards, and building details such as square footage and months occupied (Equation 4). Estimates assume the use of HFC-134a.

Equation 3:

Annual Loss (metric ton) = [Amount of Industrial Gas Added (lbs/yr) - Amount of Industrial Gas Recovered (lbs/yr)] / 2204 (lbs/metric ton)

Equation 4:

*Annual Loss Rate (metric ton/sq-ft) = 1 (kg per cooling-ton) / 500 (sq-ft per cooling-ton) * 10% (USEPA operating loss factor) / 1000 (kg/metric ton) = 0.0000002 (metric ton/sq-ft)*

To calculate CO2e emissions from refrigerants, OBXtek multiplies direct or estimated refrigerant leakage values by the refrigerant's associated GWP.

Scope 2 Indirect Sources

WRI/WBCSD's GHG Protocol Scope 2 Guidance requires "dual reporting," whereby companies report Scope 2 totals twice, calculating emissions using two distinct methods.[4] The two methods of calculating these totals are referred to as location-based reporting and market-based reporting, which are described in detail later in this section. Accounting for location- and market-based Scope 2 emissions provides transparency, distinguishes changes in the reporting company's choices versus changes in grid emissions intensity, and improves inventory completeness. Reporting on the location- and market-based methods reveals different information about a company's emissions. The location-based method calculates emissions based on the emissions intensity of the local grid in which the company's assets are located, while the market-based method shows emissions that the company is responsible for through its electricity purchasing decisions.

[4] WRI/ WBCSD GHG Protocol Initiative. (2015, September). GHG Protocol Scope 2 Guidance. An Amendment to the GHG Protocol Corporate Standard. Retrieved from https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance_Final_Sept26.pdf

Emissions from purchased energy typically occur at a utility generation facility where fuels are combusted to produce electricity, steam, or chilled or hot water. All OBXtek facilities purchase electricity but no other forms of energy. For facilities in operation less than the full reporting year, the consumption is prorated based on the fraction of the year they were in operation. The source of consumption data for these facilities is dependent on the primary facility ownership or leasing situations, of which is:

- **Triple-net lease:** OBXtek leases the facility and pays utility bills indirectly through the Landlord.

OBXtek receives energy consumption data for owned facilities but, with a few exceptions, does not receive energy consumption data for full-service gross leases. OBXtek will gather energy data for all facilities where possible. Please reference the Estimation Methodology section of this document for further detail on estimating whole and partial-year data.

Purchased Electricity

OBXtek calculates emissions from electricity use, according to the following equation:

Equation 5 (Applicable for CO_2, CH_4, and N_2O):

$$Emissions\ [MT] = Electricity\ Use\ [kWh]\ *\ Emission\ Factor\ (EF)\ \left[\frac{MT}{kWh}\right] * GWP$$

Stationary Fuels Combustion

For facilities collecting energy data, consumption of stationary fuels is tracked by facility personnel from utility bills or supplier invoices. For facilities in operation less than the full year, the consumption is prorated based on the fraction of the year they were in operation. For facilities where energy data are not tracked directly (such as leased offices), stationary fuel consumption data will be estimated using typical factors for energy consumption per square foot. For the OBXtek 2023 inventory, estimated stationary fuel consumption is reported under Scope 2 Indirect Emission Sources. Please reference the **Estimation Methodology** section of this document for further detail on estimating whole and partial-year data. Equation 1 depicts the Stationary Fuels Combustion calculation.

Equation 1:

$$GHG_{total} = \sum_{i=1}^{n} (Fuel_i * EF_{CO2}) + (Fuel_i * EF_{CH4} * GWP_{CH4}) + (Fuel_i * EF_{N2O} * GWP_{N2O})$$

where:

GHG_{total} = Total GHG Emissions in CO_2e
$Fuel_i$ = Annual Consumption of Fuel Type combusted
EF = Emission Factors
GWP = Global Warming Potentials

Purchased Hot Water

At present, no OBXtek assets purchase assets purchase hot water from a 3rd party. In the event that any OBXtek asset begins to purchase hot water, the following methodology will be used to quantify GHGs associated with this energy use. If asset activity data is in units of energy (kWh or MWh), energy generation emission factors for the appropriate region are used. If assets report hot water use in

MMBtu, hot water emissions are calculated using the methodology from CCAR General Reporting Protocol[5], shown in the equation below.

Equation 7:

$$Emissions\ [MT] = \frac{Energy\ Consumption\ [MMBtu]}{Boiler\ Efficiency} * Natural\ Gas\ Emission\ Factor\ [\frac{MT}{MMBTu}]$$

where:

Boiler Efficiency = 0.75[6]

Purchased Steam

At present, no OBXtek assets purchase assets purchase steam from a 3rd party. In the event that any given OBXtek asset begins to purchase steam, the following methodology will be used to quantify GHGs associated with this energy use. If asset activity data is in units of energy (kWh or MWh), energy generation emission factors for the appropriate region are used. If assets report steam use in MMBtu, steam emissions are calculated using the methodology from CCAR General Reporting Protocol[7], shown in the equation below.

Equation 8:

$$Emissions\ [MT] = \frac{Energy\ Consumption\ [MMBtu]}{Boiler\ Efficiency} * Natural\ Gas\ Emission\ Factor\ [\frac{MT}{MMBtu}]$$

where:

Boiler Efficiency = 0.75[8]

Location Based Method

The location-based method quantifies the average emissions from energy generated within OBXtek's geographic operating region(s). This method does not reflect any purchasing choice(s) made by OBXtek. OBXtek does not have emissions from electricity purchased directly from a generation source.

The location-based emission factors used for U.S. electricity consumption in this inventory are the subregion emission rates from U.S. EPA's eGRID, database. This database provides emission rates specific to each year, based on the mix of electricity generation in that year. OBXtek's 2023 location-

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[6] CCAR. (2009, January). General Reporting Protocol version 3.1 Pg 56-57. Retrieved from https://sfenvironment.org/sites/default/files/fliers/files/ccar_grp_3-1_january2009_sfe-web.pdf

[7] CCAR. (2009, January). General Reporting Protocol version 3.1 Pg 56-57. Retrieved from https://sfenvironment.org/sites/default/files/fliers/files/ccar_grp_3-1_january2009_sfe-web.pdf

[8] CCAR. (2009, January). General Reporting Protocol version 3.1 Pg 56-57. Retrieved from https://sfenvironment.org/sites/default/files/fliers/files/ccar_grp_3-1_january2009_sfe-web.pdf

based inventory is calculated using U.S. EPA's eGRID 2023 (February 2020). Future inventories will use the most recent eGRID rates available at the time the inventories are developed.

For international facilities, OBXtek uses The Climate Registry, Non-North America 2021 Default Emission Factors. The geographic location of the facility determines the factor that is applied.

Market-Based Method

The market-based method quantifies emissions from energy generated within OBXtek's geographic operating region(s) that OBXtek has purposefully purchased through contractual instruments (e.g., power purchase agreements (PPAs) between OBXtek and the supplier/source). However, contractual instruments recognized in the market-based method include more than green power purchases.[9] For example, residual mix factors are also utilized in the market-based method (where available).

This method reflects the GHG emissions associated with choices OBXtek makes about its energy supply and provides a conduit to claim the specific emission rate associated with these supply options (such as a REC or utility/supplier-specific factors). For each facility, the most precise emission factor available will be used. To calculate OBXtek's market-based emissions, contractual instruments are evaluated following WRI's GHG Protocol Scope 2 Guidance market-based hierarchy of emission factors. The following table provides the hierarchy for market-based emissions factors, in order from most precise to least.

Table 5. Market-based emissions factor hierarchy

Emission Factors	Examples	Description	OBXtek Inventory
Energy Attribute Certificates	Renewable Energy Certificates (RECs)	Applies to any technology, whether it is for electricity from renewable, nuclear, or fossil-fuel sources. Use the emission factor of the specific source the certificate represents. Typically, these certificates represent renewable energy and have an emission factor of zero, but the factor could be higher if there is a fossil-fuel generation component.	Not utilized.
Electricity Contracts	Power Purchase Agreement (PPA)	If no attribute certificates are generated, the contracts themselves are the basis for an emission factor. Contracts are generally between the buyer and a specific generating facility owned by another organization. The generating facility may be located at the buyer's facility (such as a solar array); it may be at a nearby location with a direct line connection to the buyer; or it may be located remotely. Use the emission factor of the generating facility with which the contract is held, which may be renewable, nuclear, or fossil fuel.	Not utilized.

[9] WRI/WBCSD GHG Protocol Initiative. (2015, January). GHG Protocol Scope 2 Guidance, Executive Summary. An Amendment to the GHG Protocol Corporate Standard. Retrieved from https://ghgprotocol.org/sites/default/files/Scope2_ExecSum_Final.pdf

Emission Factors	Examples	Description	OBXtek Inventory
Supplier-specific/ Utility Emission Factors	Factors provided by supplier of products in a deregulated market, or a utility in a regulated market	Supplier-specific emission factors may be used in the market-based method if they meet specific requirements. To be eligible, factors must reflect all electricity delivered by the supplier, including electricity generated and purchased by the supplier. Best practice is for the supplier factor to be based on the grid location where the purchased electricity is consumed, not the supplier's organization-wide average. Factors must also reflect purchases and sales of certificates.	Not utilized.
Residual Mix	European Residual Mix –AIB Green-e Residual Mix Emissions Rates	A type of emission factor representing the average emissions from all unclaimed energy (emissions and generation that remain after certificates, contracts, and supplier-specific factors have been claimed and removed from the calculation).[10]	Utilized.

Biogenic Emissions from Biofuels and Biomass

OBXtek does not currently have any biogenic fuels or energy sources that fall within the company's organizational boundary. Biogenic sources are any energy source that involves biological organisms removing (or sequestering) carbon from the atmosphere. Common examples of biogenic energy sources include ethanol and incinerated wood products.

Any future in-boundary direct CO_2 emissions from biologically sequestered carbon (e.g., CO_2 from burning biomass/biofuels) shall be reported separately from the scopes in the GHG inventory. In-boundary CH_4 and N_2O emissions from biogenic sources shall be included in the scopes of the GHG inventory.

Avoided Emissions & Carbon Neutrality Claims

Avoided emissions are emission reductions that occur outside of a product's life cycle or value chain but are a result of the use of that product. An example of avoided emissions would be a photovoltaic solar array installed at an OBXtek facility. At the time of the development of OBXtek's 2023 GHG inventory, OBXtek had no facilities with onsite renewable energy generation. At such time that OBXtek does have onsite renewable energy generation, calculation and reporting of avoided emissions by OBXtek will be done in conformance with the WRI/WBCSD GHG Protocol's *Corporate Accounting and Reporting Standard* and the guidance for *Estimating and Reporting Avoided Emissions*. To conform with the GHG Protocol, avoided emissions have been excluded from OBXtek's scope 1 and scope 2 emissions but may be calculated and reported separately in public reporting and disclosures.

[10] WRI/ WBCSD GHG Protocol Initiative. (2015, September). GHG Protocol Scope 2 Guidance. An Amendment to the GHG Protocol Corporate Standard. Retrieved from https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance_Final_Sept26.pdf

Carbon neutral claims (the act of counterbalancing the emission of carbon dioxide with carbon offsets) will be expressed as a "Net" value deducting for offsets as shown in equation 9.

Equation 9:

$$Total\ Emissions\ Net\ of\ Off\text{-}sets\ [MT] = Scope\ 1\ Emissions\ [MT] + Scope\ 2\ Market\text{-}based\ Emissions [MT] + Scope\ 3\ Emissions\ [MT] - Carbon\ Off\text{-}sets [MT]$$

This value is calculated on the Dashboard tab of the OBXtek GHG Inventory Model.

Emission Factors

The emission factors listed in **Appendix E – Scope 1 Direct & Scope 2 Indirect Emission Factors** were used to calculate emissions for reporting year 2023. Emission factors will be updated as new versions are released in publicly available free sources such as the U.S. EPA's Center for Corporate Climate Leadership's GHG Emission Factors Hub. Other licensed emission factors, such as the IEA factor sets used to calculate scope 2 emissions, shall be updated as necessary.

Base Year Emissions (CL 22-24)

OBXtek uses the base year of Reporting Year 2022. OBXtek will assess whether future adjustments to the base year are necessary after future inventories are developed. During any future year inventory development effort, the base year inventory will need to be adjusted in response to changes in the corporate structure. When developing any future annual inventories, the Inventory Manager will evaluate whether any structural changes have occurred, such as acquisitions or divestitures, and if these require a baseline adjustment. The base year inventory will also need to be adjusted in response to any errors discovered or changes in quantification methodologies or emission factors. If any of these changes result in more than a 0.5% change in base year emissions, then an adjustment should be made. Adjustments less than this threshold are considered insignificant and can be decided case by case.

The following list provides information on when and how to adjust the baseline for OBXtek corporate structural changes:

- **Merger or Acquisition:** In the case of a merger or acquisition, the emissions from the facilities of the acquired entity will be added to the base year inventory. Base year emissions for acquired facilities will be calculated using data for the base year. If these data are unavailable, the earliest year of data will be used and kept constant back to the base year.
- **Divestiture:** Emissions from facilities that are part of a divested business unit shall be removed from the base year inventory.
- **Organic Growth or Decline:** The base year shall not be adjusted for organic growth or decline, such as increases or decreases in business activity, or opening or closing of facilities when not part of a structural change.
- **Emission Factors Changes:** Global warming potentials (GWPs) and emission factors that are based on mass balance, such as stationary combustion factors for natural gas and other fuels, shall remain consistent across inventory years. If a change is made in a future inventory year, then the base year should also be updated using the new factors if the estimated impact is greater than 0.5%. In contrast, electricity grid factors change regularly to reflect the changing generation mix of the grid and should not be constant across inventory years. Future inventory

years should use the matching annual electricity factors, but the base year inventory shall not be updated with future year emission factors for electricity.

- **Methodology Changes:** If the methodology of how emissions are calculated changes, and it is possible to use the updated methodology in the base year, an adjustment shall be made. For example, if a more accurate set of activity data or measured data is available to replace default factors or averages, then this change should also be made in the base year inventory, if possible, so fair comparisons across years can be made.

Management Tools (CL 24-26)

Roles and Responsibilities (CL 24)

A detailed list of contributors to the inventory can be found in **Appendix F – OBXtek GHG Emissions Inventory Process Roles and Responsibilities**.

Training (CL 25)

Following review of the inventory by the OBXtek Quality Manager, results of the inventory will be brief to the OBXtek Senior Management team. Results of the inventory will include identification of any data gaps, changes in emission patterns, best practices, and other findings. The OBXtek Quality Manager, or designee, will provide regular updates to the OBXtek Senior Management team on greenhouse gas emissions data collection and tracking best practices. At the conclusion of the development of the annual greenhouse gas emissions inventory, the OBXtek Senior Management team will work with the CCO to set sustainability goals for future years and updates to the OBXtek corporate strategic plan.

Document Retention and Control Policy (CL 26)

Document retention and version control are important factors in ensuring that data and inventory files stay organized so that the proper files are used when making revisions or updates. Electronic and/or paper copies of utility bills will be retained in accordance with each facility's record retention program. Inventory files will be marked by a version number or date on which an inventory adjustment was made to distinguish original inventory files from adjusted files. The Inventory Manager will maintain all electronic files in accordance with OBXtek document retention policies. This will be repeated each year an inventory is completed so that proper records are maintained, and future verification of previous inventories is possible.

Auditing & Verification (CL 27-30)

Internal Auditing (CL 27)

Currently, OBXtek does not currently have a formal internal auditing process for the GHG inventory. The GHG internal audit will be rolled into OBXtek's ISO 14001 internal audit process. The following points will be included in future audits:

Each year, the Inventory Manager will spot-check the data against benchmarks and previous years' data, asking data suppliers for clarification and determining an explanation of outliers. The purpose of this process is to identify gaps and errors in inventory management to ensure an accurate and consistent inventory from year to year.

Once OBXtek finalizes its annual GHG inventory, a senior manager will review the inventory and methodology. Progress towards any emissions reduction goals and year-over-year comparisons should also be tracked.

External Validation and/or Verification (CL 28)

OBXtek does not intend to pursue 3rd-party assurance of the GHG Inventory at this time. An opportunity for improvement is for OBXtek to pursue 3rd party verification of its GHG inventory, along with any other sustainability metrics it tracks.

Management Review (CL 29)

OBXtek will annually review the aggregated GHG inventory. If environmental data is published in public-facing reports, OBXtek's Senior Management, communications and/or legal team(s) will review prior to external publication.

Corrective Action (CL 30)

OBXtek is committed to an inventory process that is relevant, complete, concise, transparent, & accurate. To avoid repetition of errors, OBXtek corrects identified data gaps and errors in a timely manner and makes any required procedural changes as necessary.

Opportunities for Improvement (OFI)

OBXtek utilizes OFI's to facilitate continuous improvement of its GHG inventory process & results. When OFI's are identified or reported they are documented in this IMP as well as through our PIR system along with recommendations.

Appendix A – Greenhouse Gas Emissions Historical Statement

	CY 2022	**CY 2023**	**CY 2024**
Scope 1	5.6	5.7	5.7
Stationary Combustion	-	-	
Mobile Combustion	.48	.59	.54
Refrigerants	5.13	5.12	5.13
Scope 2 Location-Based	46.58	313.46	313.46
Scope 2 Market-Based	46.58	313.13	313.13
Total S1+S2 (Location-Based)	52.18	319.16	319.16
Total S1+S2 (Market-Based)	52.17	319.13	319.13
Total Market-Based GHG Emissions	**52.17**	**319.13***	**319.13**

*Emissions calculations from OBXtek's headquarters office allocation of common area energy usage changed between 2022 and 2023 so measurement from year to year is no longer applicable and goals will be set for 2024 based on the revised information from 2023.

Appendix B – Facilities Within OBXtek's GHG Inventory Boundary (CL 6)

Facility Site Name	Street Address	Country	City	State	Square Footage
Corporate Headquarters	2000 Corporate Ridge Road, Suite 400	USA	McLean	VA	16,774

Appendix C – Direct & Indirect Emission Activity Data Within OBXtek Inventory Boundary (CL 16)

	Activity Data	**Source of Activity Data**	**Process for collection of activity data from source**
SCOPE 1- Stationary Combustion	*None reported for FY2023*		
SCOPE 1 - Mobile Combustion	Fleet Vehicles	Annual fuel consumption	Fuel data is submitted to the Inventory Manager annually and entered into the GHG inventory model.
SCOPE 1 - Fugitive Emissions	HVAC Refrigerants	Estimated; See *Emissions Quantification and Calculation Methodologies* For facilities where energy data are not tracked directly (such as leased offices), stationary fuel consumption data will be estimated using typical factors for energy consumption per square foot.	Emissions are estimated using HVAC industry standards.
SCOPE 2 - Purchased Electricity	Purchased Electricity	Utility invoices	Purchased electricity data is submitted to the Inventory Manager annually and entered into the GHG inventory model.

Appendix D – Commercial Building Energy Consumption (CBECS) 2018 Data

Electricity Energy Intensity (kWh/square foot)					
CBECS Table:	**C15**	**C15**	**C15**	**C15**	**C14**
Principal Building Activity	**Northeast**	**Midwest**	**South**	**West**	**National Average**
Education	7.9	8.1	11.4	9	9.4
Food sales	Q	67.3	53.7	Q	53.3
Food service	29.7	43	52.7	36.9	43.8
Health care	19	25	27.3	22.2	23.8
Inpatient	22.4	28.3	32.2	29.5	28.8
Outpatient	15.9	18.6	19.6	15.9	17.4
Lodging	13.7	14.8	15.2	13.2	14.4
Mercantile	15.1	15.4	17.8	17.2	16.7
Retail (other than mall)	11.3	12.7	15.3	13	13.7
Enclosed and strip malls	17.9	18.9	20.2	20.1	19.6
Office	13.8	12	15.4	12.5	13.6
Public assembly	9.7	11.6	15.1	9.4	12.2
Public order and safety	Q	Q	16.7	11.6	13.9
Religious worship	5.1	4.3	5.4	4.2	4.9
Service	7.3	5.8	9	7.6	7.2
Warehouse and storage	6	5.5	6.6	5.5	6
Other	31.4	24	25.3	45.5	29.1
Vacant	Q[11]	4.2	5.1	Q	4.1

[11] Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 20 buildings were sampled

Natural Gas Intensity (cubic feet/square foot)					
CBECS Table:	**C25**	**C25**	**C25**	**C25**	**C24**
Principal Building Activity	**Northeast**	**Midwest**	**South**	**West**	**National Average**
Education	41.5	38.7	21.2	21.9	30.8
Food sales	Q	75.4	Q	Q	69.2
Food service	Q	212	152.2	106.4	147.6
Health care	58.2	59.4	63.5	54.2	59.1
Inpatient	89.5	71.1	76	84	77.9
Outpatient	30.9	34	22.8	22.4	27.8
Lodging	45.7	44.1	27.1	38.6	37
Mercantile	41.9	41.4	28.9	37.1	35.7
Retail (other than mall)	25	26.4	20	22.5	23.3
Enclosed and strip malls	49.2	58.9	34.2	43.9	44
Office	20.6	26.3	18.7	18.6	21.3
Public assembly	52.6	48.5	28.7	33.5	39.8
Public order and safety	Q	Q	40.2	34.8	35.5
Religious worship	33.8	28.6	16.7	17.4	22.2
Service	38.2	38.3	51.3	39.1	41.9
Warehouse and storage	19.3	27.7	13.5	10.4	18.6
Other	38.7	Q	21.2	Q	29.2
Vacant	Q	Q	Q	Q	19.2

Appendix E – Global Warming Potentials (CL 15)

Gas	100-Year GWP	Blend Composition
HFC-23	14,800	
HFC-32	675	
HFC-41	92	
HFC-125	3,500	
HFC-134	1,100	
HFC-134a	1,430	
HFC-143	353	
HFC-143a	4,470	
HFC-152	53	
HFC-152a	124	
HFC-161	12	
HFC-227ea	3,220	
HFC-236cb	1,340	
HFC-236ea	1,370	
HFC-236fa	9,810	
HFC-245ca	693	
HFC-245fa	1,030	
HFC-365mfc	794	
HFC-43-10mee	1,640	
SF_6	22,800	
NF_3	17,200	
CF_4	7,390	
C_2F_6	12,200	
C_3F_8	8,830	
c-C_4F_8	10,300	
C_4F_{10}	8,860	
C_5F_{12}	9,160	
C_6F_{14}	9,300	
$C_{10}F_{18}$	>7,500	

Appendix F – Scope 1 Direct and Scope 2 Indirect Emission Factors (CL 15)

Scope 1 Direct Emission Factors (U.S. EPA Emission Factor Hub, April 2022)

Stationary Combustion Fuel Type	**Kg CO_2/MMBtu**	**Kg CH_4/MMBtu**	**Kg N_2O/MMBtu**
Natural Gas	53.0600	0.0010	0.0001
No. 2 Fuel Oil/Diesel	73.9600	0.0030	0.0006
Liquefied Petroleum Gas (LPG/Propane)	61.7100	0.0030	0.0006
Gasoline	70.2200	0.0030	0.0006
Mobile Combustion Fuel Type	**Kg CO_2/MMBtu**	**Kg CH_4/MMBtu**	**Kg N_2O/MMBtu**
Compressed Natural Gas (CNG)	5.44		
Diesel Fuel	10.21		
Gasoline	8.78		

Scope 2 Location Based Indirect Emission Factors (EPA eGRID2021)

eGRID Subregion	eGRID subregion name	eGRID subregion annual CO_2 total output emission rate (lbs/MWh)	eGRID subregion annual CH_4 total output emission rate (lbs/MWh)	eGRID subregion annual N_2O total output emission rate (lbs/MWh)
AKGD	ASCC Alaska Grid	1,067.68	0.091	0.012
AKMS	ASCC Miscellaneous	485.19	0.025	0.004
AZNM	WECC Southwest	819.66	0.052	0.007
CAMX	WECC California	531.68	0.031	0.004
ERCT	ERCOT All	813.55	0.054	0.008
FRCC	FRCC All	832.92	0.053	0.007
HIMS	HICC Miscellaneous	1,134.39	0.135	0.021
HIOA	HICC Oahu	1,633.10	0.176	0.027
MROE	MRO East	1,582.14	0.148	0.022
MROW	MRO West	995.79	0.107	0.015
NEWE	NPCC New England	539.37	0.072	0.009
NWPP	WECC Northwest	634.60	0.058	0.008
NYCW	NPCC NYC/Westchester	816.76	0.019	0.002
NYLI	NPCC Long Island	1,210.94	0.126	0.016
NYUP	NPCC Upstate NY	233.08	0.015	0.002
PRMS	Puerto Rico Miscellaneous	1,558.02	0.081	0.013
RFCE	RFC East	672.79	0.049	0.007
RFCM	RFC Michigan	1,214.06	0.115	0.016
RFCW	RFC West	1,046.13	0.095	0.014
RMPA	WECC Rockies	1,158.86	0.109	0.016
SPNO	SPP North	991.73	0.108	0.016
SPSO	SPP South	1,031.60	0.080	0.012
SRMV	SERC Mississippi Valley	772.74	0.040	0.006
SRMW	SERC Midwest	1,543.03	0.171	0.025

eGRID Subregion	eGRID subregion name	eGRID subregion annual CO_2 total output emission rate (lbs/MWh)	eGRID subregion annual CH_4 total output emission rate (lbs/MWh)	eGRID subregion annual N_2O total output emission rate (lbs/MWh)
SRSO	SERC South	891.91	0.067	0.010
SRTV	SERC Tennessee Valley	931.59	0.087	0.013
SRVC	SERC Virginia/Carolina	639.67	0.052	0.007
U.S. Average		852.30	0.071	0.010

Scope 2 Market Based Indirect Emission Factors for Residual Mix (2021 Green-e® Residual Mix Emissions Rates)

eGRID Subregion	eGRID subregion name	eGRID subregion annual CO_2 total output emission rate (lbs/MWh)	eGRID subregion annual CH_4 total output emission rate (lbs/MWh)	eGRID subregion annual N_2O total output emission rate (lbs/MWh)
AKGD	ASCC Alaska Grid	1,126.04	0.091	0.012
AKMS	ASCC Miscellaneous	549.31	0.025	0.004
AZNM	WECC Southwest	954.89	0.052	0.007
CAMX	WECC California	461.46	0.031	0.004
ERCT	ERCOT All	927.31	0.054	0.008
FRCC	FRCC All	867.37	0.053	0.007
HIMS	HICC Miscellaneous	1,185.60	0.135	0.021
HIOA	HICC Oahu	1,694.54	0.176	0.027
MROE	MRO East	1,502.60	0.148	0.022
MROW	MRO West	1,149.60	0.107	0.015
NEWE	NPCC New England	490.94	0.072	0.009
NWPP	WECC Northwest	733.82	0.058	0.008
NYCW	NPCC NYC/Westchester	533.80	0.019	0.002
NYLI	NPCC Long Island	1,208.98	0.126	0.016
NYUP	NPCC Upstate NY	232.36	0.015	0.002
PRMS	Puerto Rico Miscellaneous	1,554.21	0.081	0.013
RFCE	RFC East	695.24	0.049	0.007
RFCM	RFC Michigan	1,189.95	0.115	0.016
RFCW	RFC West	1,068.07	0.095	0.014
RMPA	WECC Rockies	1,274.88	0.109	0.016
SPNO	SPP North	1,147.55	0.108	0.016
SPSO	SPP South	1,185.98	0.080	0.012
SRMV	SERC Mississippi Valley	808.45	0.040	0.006
SRMW	SERC Midwest	1,592.27	0.171	0.025

eGRID Subregion	eGRID subregion name	eGRID subregion annual CO_2 total output emission rate (lbs/MWh)	eGRID subregion annual CH_4 total output emission rate (lbs/MWh)	eGRID subregion annual N_2O total output emission rate (lbs/MWh)
SRSO	SERC South	975.84	0.067	0.010
SRTV	SERC Tennessee Valley	949.91	0.087	0.013
SRVC	SERC Virginia/Carolina	678.35	0.052	0.007

Scope 2 Indirect Emission Factors for District Fuels (U.S. EPA Emission Factor Hub, April 2022)

Steam and Hot Water	CO_2 Emission Factor (kg/MMBtu)	CH_4 Emission Factor (g/MMBtu)	N_2O Emission Factor (g/MMBtu)
Steam and Hot Water	66.33	1.250	0.125

Appendix G – OBXtek GHG Emissions Inventory Process Roles and Responsibilities

Activity/Process/Asset	Name(s)	Title(s)
GHG Inventory Management	Aaron Drabkin	General Counsel & Chief Compliance Officer
Scope 2: Purchased Electricity	Ashley McHugh	Accounts Payable Specialist