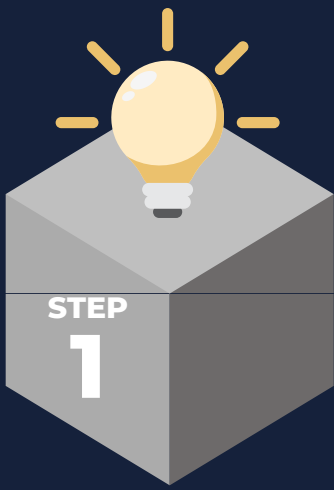

LANDLORD ENGAGEMENT AND EMISSIONS CALCULATION ROADMAP

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LANDLORD ENGAGEMENT AND EMISSIONS CALCULATION STRATEGY





Understand necessary data for calculations

There are two methods to calculate GHG emissions of leased office spaces.

Asset-specific uses utility usage from bills or meters, while **average data** uses regional average consumption. Below is a list of information that may be needed to be gathered for calculations.

ASSET-SPECIFIC

UTILITY CONSUMPTION
(KWH, CUBIC FT, ETC.)
(SUB-METERED OR NOT)
(DATA FROM BILLS OR METERS)

TOTAL OFFICE SQUARE
FOOTAGE

OCCUPANCY RATE

REFRIGERANT LEAKAGE

LEASED OFFICE SPACE
SQUARE FOOTAGE

EMISSION FACTORS

GLOBAL WARMING
POTENTIAL

AVERAGE DATA

AVERAGE CONSUMPTION
DATA

LEASED OFFICE SPACE
SQUARE FOOTAGE

EMISSION FACTORS

GLOBAL WARMING
POTENTIAL

*factors in **yellow** are required regardless of method selected



Collecting & organizing bills

Compile all the bills received from properties into a digital database or utilize an existing one designed for managing bills. Additionally, compile relevant information regarding LEED-certifications, sub-metering, and other information about the offices that could influence calculation data into a tracking sheet. This information may be present in Requests for Proposals (RFPs) (see Sustainable Leasing Policy for more information).

When applicable, correlate the RFPs with the bills. RFPs may have relevant information missing from bills. For example, properties that are LEED-certified already have sub-metering in place, allowing for more specific data requests in future steps.

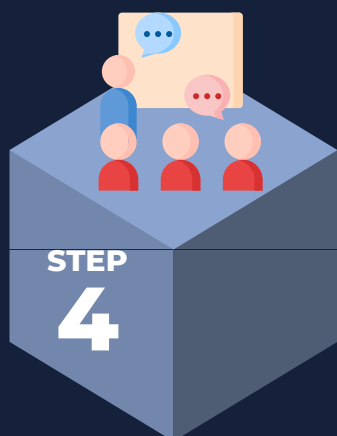
Categorize the bills based on different criteria of interest, such as whether the property is sub-metered or not, square footage, type of utilities used, or region of the property, for example. This helps to establish a baseline of available data.



Identify Gaps in Data

To identify any gaps in data, review the information provided on the bills. This includes taking note of the **building's total area, occupancy rate, and utility consumption data**. By examining these factors, you can determine if there are any limitations in the existing data for emissions calculations by ensuring that accurate data is available for reporting.

Utility Consumption	Total area	Occupancy Rate
1500 kWh	?	95%
?	2550 sq ft	64%



Engage with the office administrators

Compile a list of office administrators (OAs) for each leased office, or utilize an existing contact sheet. OAs are key points of contact between Gannett Fleming and landlords.

Meeting or corresponding via email with OAs is crucial for **building relationships** and communicating the **sustainability goals** of obtaining billing data.

Clear and effective communication with OAs is a critical component in encouraging buy-in.



Establish landlord tracking form

A tracking form can be created for OAs to facilitate data collection and relationship assessment with landlords. The form may include fields for **OA name and contact information**, and **landlord name and contact information**, which can be filled out by the OA.

Additionally, a column can be added to assess the relationship strength between the OA and the landlord, with options such as strong, good, neutral, weak, or none for the OA to provide feedback. This information can help Gannett Fleming to better understand the dynamics of their relationships and tailor communication strategies accordingly. If applicable, another column can include the years that the office participated in GHG collection efforts to keep track of communication patterns.



Office administrators reach out to landlords

OAs reaching out to landlords to request specific data can increase the likely hood of landlords responding. This involves determining the proper wording for the request ([example here](#)).

The data request can be specific questions included in an email with Gannett Fleming CCed, or an online form (such as Microsoft of Google) that landlords can fill out which would then go to Gannett Fleming for review. Exploring potential incentives to encourage landlord responses can be considered.

If landlords do not respond within a designated timeframe, follow-up messaging may be necessary to ensure data collection is completed effectively.



Use available data to do calculations

First, you need to determine which methodology and equations will be used for each leased office space. Once they are determined, use the [Power Profiler Emissions Tool](#), or another calculation spreadsheet. The two calculations introduced in Step 1 are pulled from the GHG Protocol Category 8.

Asset-specific Data Method

For this calculation method, you will need specific utility consumption data presented below:

UTILITY CONSUMPTION
(KWH, CUBIC FT, ETC.)
(SUB-METERED OR NOT)
(DATA FROM BILLS OR METERS)

TOTAL OFFICE SQUARE FOOTAGE

OCCUPANCY RATE

REFRIGERANT LEAKAGE

LEASED OFFICE SPACE SQUARE FOOTAGE

EMISSION FACTORS

GLOBAL WARMING POTENTIAL

sub-metered leased office spaces

$$\text{leased office space utility usage} \times \text{regional emission factor} \times \text{global warming potential} = \text{CO}_2\text{e emissions}$$

If a building is not sub-metered, but the data on the entire building's utility usage is available, use the NOT sub-metered equation below:

NOT sub-metered leased office spaces

$$\left(\frac{\text{leased office space (ft}^2\text{)}}{\text{total building (ft}^2\text{)} \times \text{occupancy rate}} \right) \times \text{building's total utility usage} \times \text{regional emission factor} \times \text{global warming potential} = \text{CO}_2\text{e emissions}$$

If no utility usage data is available, or it is unreliable, the Average Data method should be used.

Average Data Method

The average data method uses average utility consumption data. Since it is an estimate using average data from other buildings, it is the least accurate way to calculate emissions (out of the two calculations presented in this roadmap).

Data needed for the Average Data calculation method:



Average Data Equation

$$\left(\text{leased office space (ft}^2\text{)} \times \text{average intensity (unit/ft}^2\text{)} \right) \times \text{regional emission factor} \times \text{global warming potential}$$

Where to find average data, emission factors, global warming potentials, and other relevant information:

BUILDING AVERAGE CONSUMPTION DATA

United States average consumption data for commercial buildings can be found in the [Commercial Building Energy Consumption Survey \(CBECS\)](#).

The CBECS has a variety of characteristics for determining the average consumption data of a building. When using the tables provided by the CBECS, choose the two characteristics that best represent the leased office buildings (including their differences).

Example: If multiple buildings are located in different regions and they all are being used for generic office activities, using the "region" and the "office" building type categories would be a good fit for determining average consumption.

REGIONAL EMISSION FACTORS

The type and amount of emissions vary based on the electricity generation of the region, so look at the eGRID provided by the Environmental Protection Agency (EPA) emission rates which are equivalent to regional emission factors. The [Power Profiler Tool](#) gives specific subregion rates.

Natural gas emission factors are the same across the country at 0.05444 kg CO₂ per cubic foot of natural gas consumed. Because the same fuel, natural gas, is being burned for heat production, there is not variation in emission factors.

GLOBAL WARMING POTENTIAL

Global warming potentials are used to convert GHGs into a comparable unit of carbon dioxide equivalent, most commonly referred to as CO₂e.

The Greenhouse Gas Protocol provides a [Global Warming Potential Values table](#) adapted from the IPCC. These conversions should be used to calculate the total CO₂e that the company will then report in their annual disclosures. The most commonly used measurement of CO₂e is metric tonnes.

STEAM HEATING

Units for consumption units may vary by billing, including MLBs which is an unusual unit of measure. For this reason, we wanted to provide the conversions and calculations. The emission factors provided by the EPA for steam are per mmbtu, therefore converting MLB to mmbtus is necessary. Here are the steps:

1. Convert MLBS into pounds
(1000lbs/MLB according to the utility)
Be sure to check the specifications the utility provides
2. Converted lbs into btu
(1194 btus/lbs according to [Energy Star](#))
3. Converted btu into mmbtu
(1,000,000 btu/mmbtu)
4. Multiply the total mmbtu by emission factors for steam:
66.33 of CO₂/mmbtu
1.25 of CH₄/mmbtu
0.125 of N₂O/mmbtu
(according to the [EPA Emission Factors](#))
5. Convert the totals into CO₂e, using the global warming potentials listed above.



Track annually, create goals

Establish a process for tracking response rates year over year to ensure you are capturing emissions data from all relevant sources and identify any areas where additional engagement is needed. Utilizing recommendations in the Sustainable Leasing Policy may be a vital step in improving the data retrieval process.

Once emissions calculations are completed, this data can be included in Gannett Fleming's sustainability reports in accordance with selected frameworks and relevant policies.

Policies may include:

- State-specific
 - California's Mandatory Reporting of Greenhouse Gas Emissions (MRR)
- National
 - U.S. Federal Supplier Greenhouse Gas Accounting and Reporting Requirements
 - May require Significant Contractors (\$7.5-50 million) to report Scope 1 & 2 emissions
- International
 - European Union's Sustainable Finance Disclosure Regulation (SFDR)

Emissions reduction goals and improving greenhouse gas management systems are the final step in the process. Regularly monitor progress toward your reduction goals and adjust strategies as needed. Make sure to celebrate successes along the way and recognize individuals and teams for their contributions to emissions calculations and achieving reduction goals.

EMISSION REDUCTION TARGET SETTING	REQUIRED INVENTORY
<u>Science Based Target Initiative</u>	Scope 1, 2, & 3
<u>Net Zero Initiative</u>	Scope 1, 2, & 3
GHG Protocol (Chapter 11)	Self-determined
<u>Carbon Disclosure Project</u>	Self-determined

Referenced resources

[GHG Protocol Scope 3 Category 8](#)

[Commercial Building Energy Consumption Data](#)

[Environmental Protection Agency Power Profiler Tool](#)

[Global Warming Potential Values](#)