

Greenhouse Gas Reduction Fund

Quality Assurance Project Plan (QAPP)



Produced for:

United States Environmental Protection Agency

Office of the Greenhouse Gas Reduction Fund

Last updated by Climate United Fund: February 2025

A1: Title Page

Quality Assurance Project Plan (QAPP) for

Climate United Fund

Revision Number: Original Version

Date of Submission: February 2025

Grant Number (FAIN): 84094001

Period of Applicability: Starts in **February 2025** and ends on **February 28, 2030**, or until a new version of the QAPP is approved, whichever is sooner, and not to exceed 5 years. The QAPP will be reviewed on a yearly basis.

QAPP Revision History

Revision No.	Description	Author	Date
Original	Original Version	Climate United Fund	February 2025

A2. Approval Page

Title	Name	Signature
EPA Project Officer (PO)		
EPA Quality Assurance Manager (EPA QAM)		
CUF Quality Assurance Executive	Tony Costello	
CUF Interim Quality Assurance Manager (CUF QAM)		

Acronym/Abbreviations/Definitions

BEV	Battery Electric Vehicle
CPCCC	CPC Climate Capital, LLC
CU/Climate United	CUF, CPC and SHCC, as the Climate United coalition
CUF	Climate United Fund
DOE	U.S. Department of Energy
EIA	U.S. Energy Information Administration
EPA	U.S. Environmental Protection Agency
GGRF	Greenhouse Gas Reduction Fund
GHG Calculators	Tools used to calculate reduced and avoided GHG emissions. These include EPA-provided tools for Priority Projects (Priority Project 1 GHG Calculator, Priority Project 2 GHG Calculator, Priority Project 3 GHG Calculator) and other tools, approved in accordance with this QAPP, which may be used to calculate greenhouse gas reductions
IMM	CUF's Department of Impact, Management, and Measurement
OGGRF	Office of the Greenhouse Gas Reduction Fund
LIDAC	Low-Income and Disadvantaged Community
PII	Personally Identifiable Information
PO	Project Officer
Portfolio Manager	ENERGY STAR Portfolio Manager
Project	CUF's deployment of funds under the NCIF program as set forth in CUF's grant agreement with the EPA
QA	Quality Assurance: Management activities involving planning, implementation, assessment, reporting, and quality improvement to ensure that a process, item, or service is of the type and quality needed and expected.
QAM	Quality Assurance Manager
QAPP	Quality Assurance Project Plan
QMP	Quality Management Plan
QC	Quality Control: Technical activities that measure the attributes and performance of a process, item, or service against defined standards to verify that they meet the stated requirements
SHCC	Self-Help Climate Capital, LLC
Transaction Partners	Organizations that receive funding from CUF to implement qualified projects
VIN	Vehicle Identification Number

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A4. Project Purpose, Problem Definition, and Background

Under the Inflation Reduction Act, Congress provided many tools to pursue GHG reductions including the Greenhouse Gas Reduction Fund (GGRF) program. Under these Congressional authorities, the EPA seeks to achieve three broad objectives through GGRF:

1. Reduce emissions of greenhouse gases and other air pollutants.
2. Deliver benefits of greenhouse gas- and air pollution-reducing projects to American communities, particularly low-income and disadvantaged communities; and
3. Mobilize financing and private capital to stimulate additional deployment of greenhouse gas- and air pollution-reducing projects.

The purpose of this Project's environmental information operations is to track impact at the qualified project level and analyze impact at the portfolio level to make necessary adjustments in products, partnerships, and market building support. CUF's performance will be tracked against the metrics included in EPA's reporting guidance across three categories that map to the programmatic objectives described above: Climate and Air Pollution, Equity and Community Benefits, and Market Transformation. This will provide CUF with performance indicators to track and assess progress against topline outcomes.

A5. Project Task Description

Greenhouse Gas Emissions Calculators

One of the primary objectives of GGRF is to reduce and/or avoid greenhouse gas and other criteria air pollutants emissions through investments in qualified projects. To calculate emissions reductions efficiently, quickly, and consistently across grantees, OGGRF has provided GGRF grantees with GHG Calculators. Inputs into these calculators include information on equipment, appliance, and materials deployment and essential attribute / metadata; baseline inventories, and other relevant assumptions (e.g., replacement of existing building stock, new construction).

The EPA provided 17 different calculator options across the three priority project categories. In general, CUF intends to use the calculators listed below for each specified project type. In all cases, the exact calculator used will be documented for each project for auditing and quality control purposes. CUF intends to run the calculators for all Transaction Partners. Currently, CUF uses the Microsoft Excel templates provided by the EPA to run the calculations for each project. We will automate the calculations in Excel or another similar program, using the same underlying data and methodology provided by the EPA, for running large datasets. When developing the automation, our calculations are verified by comparing to calculations directly from the EPA-provided Excel spreadsheet.

Priority Project Category	Calculator Type	Project Description
Priority Project 1: Distributed Generation	Distributed Solar Calculator	Projects that involve the financing of solar panels, including utility-grade solar farms, microgrids and rooftop solar.
Priority Project 1: Distributed Generation	Distributed Wind Calculator	Projects that involve the financing of wind turbines.
Priority Project 2: Net Zero Buildings	Electric Use Efficiency Calculator	Projects that finance electricity use efficiency upgrades for single-family homes.
Priority Project 2: Net Zero Buildings	HVAC Update Calculator	Projects that finance new HVAC systems that switch from one fuel type to another in single-family homes.
Priority Project 2: Net Zero Buildings	Water Fixtures and Heat Calculator	Projects that finance new water heaters that switch from one fuel type to another in single-family homes.
Priority Project 2: Net Zero Buildings	Net-Zero Housing Calculator	Projects that finance the new construction of net-zero single family homes.
Priority Project 3: Zero-Emissions Transportation	Onroad Vehicle Calculator	Projects that finance the purchase of battery electric vehicles, plugin-hybrid electric vehicles or gaseous hydrogen fuel cell electric vehicles for on-road use.

For multifamily housing, commercial buildings and community facilities, CUF intends to use ENERGY STAR Portfolio Manager, discussed in more detail later in Section A5. We may also use the other EPA-provided calculators for projects as necessary and will document that usage in the QAPP when necessary.

Data will be collected at the project level for each qualified project. Because CUF will be working with hundreds of Transaction Partners, the exact source and method of data collection may vary from project to project and technology to technology. **Table 1: Priority Project Calculators Project Task Descriptions¹** summarizes the data CUF may ask Transaction Partners to provide for each project, based on the codified project type, for input into the GHG Calculators.

¹ **Table 1: GHG Calculators Project Task Descriptions** is located at the end of the QAPP given its length.

Where commercially reasonable, Transaction Partners will report primary data from energy audits/assessments, energy bills, or on-the-ground technical experts (electricians, contractors, certified energy managers). However, CUF acknowledges that collecting this information at the onset of our Program will be a significant challenge. Some primary data will become easier to collect as the market matures, but other primary data may remain difficult to collect throughout the performance period. Accordingly, **Table 1** includes both primary data which may be collected as well as suggested alternative estimate-based approaches. **Table 1** does not represent a comprehensive list of all alternative estimate-based approaches. If Transaction Partners report that the approach proposed in **Table 1** is not practical or commercially reasonable, CUF will work with them to identify a viable alternative that meets the requirements outlined in this QAPP and will document such alternative accordingly as described below. The inclusion of quality estimate-based data will allow CUF to proceed with the Project while still conducting high-quality environmental information operations. In all instances, when precise data is not available, we will seek to use a reasonable approach as to which data is selected, based on the alternative information available. Transaction Partners will be asked to track the source of the input data they provide and may be asked to report this information to CUF.

All project and data files will be stored on servers maintained by any of CUF, SHCC or CPCCC as further described in Sections *A12. Documents and Records* and *B7. Environmental Data Protection and Information Management*. We will collect environmental information from our Transaction Partners on all financial assistance provided under the Project.

ENERGY STAR Portfolio Manager and Audit Template

ENERGY STAR Portfolio Manager (“**Portfolio Manager**”) and the Department of Energy Audit Template may be used to conduct environmental information operations to collect existing data for net-zero building projects. This QAPP incorporates by reference all the quality assurance measures necessary to operate ENERGY STAR Portfolio Manager and Audit Template such as built-in data validation, calculation methodologies, required inputs, and assumptions. Documentation for these products may be found at the following links:

- ENERGY STAR Portfolio Manager: <https://portfoliomanager.energystar.gov/>²
- Department of Energy Audit Template: <https://buildingenergyscore.energy.gov/>

To supplement the quality assurance measures in the above-referenced products, **Table 2: Energy Star Portfolio Manager and Audit Template Project Task Description**³ will summarize the data operations required to accurately use ENERGY STAR Portfolio Manager and the Department of Energy Audit Template. Inclusion of data in this table does not imply that it must be collected and reported to the EPA but is only for the proper operation of Portfolio Manager and Audit Template. EPA intends to provide template language for **Table 2**. Accordingly, CUF may, but is not required to, amend **Table 2** to reflect such EPA guidance. Any adoption of the EPA guidance shall be considered a non-substantive

² All hyperlinks within this document were confirmed as active as of 14 February 2025. In addition, all resources which can be downloaded and saved for reference, have been saved to a CUF folder for future reference should information be taken down, or links are broken. This will enable continual use of these resources in the absence of valid hyperlinks.

³ **Table 2: Energy Star Portfolio Manager and Audit Template Project Task Description** is located at the end of this QAPP.

amendment. CUF shall not use Portfolio Manager as a GHG Calculator until such time as **Table 2** has been modified whether in accordance with EPA guidance or otherwise.

Priority Project 2 Calculators vs. ENERGY STAR Portfolio Manager

For net-zero buildings, CUF intends to use either the EPA-provided Priority Project 2 Calculators or Portfolio Manager. For consumer loans, including energy efficiency upgrades to single-family households and green mortgages, we will primarily utilize the EPA-provided Priority Project 2 Calculators with data collected per the information below in **Table 1**. For multi-family projects, community facilities and other larger building projects, we will primarily utilize Portfolio Manager per the information that will be populated in **Table 2** when EPA provides guidance.

CUF recognizes that certain projects may be better suited to one methodology or the other, and accordingly, to more efficiently collect the highest quality environmental information, we reserve the right to use the most appropriate tool for a specific project. If the methodology used differs from the default methodology set forth above, CUF will document the reasoning behind such choice.

Non-Priority Project Environmental Information & GHG Calculations

CUF may, in accordance with our workplan, finance agricultural projects that require another method to estimate GHG reduction or avoidance. At this time, CUF intends to use COMET-Farm, a tool developed by Colorado State University in conjunction with the United States Department of Agriculture and the Natural Resources Conservation Service that estimates the GHG emissions of farm and ranch operations and the potential GHG reductions related to different management practices. COMET-Farm is based on the USDA's [Quantifying Greenhouse Gas Fluxes: Methods for Entity Scale Inventory](#).

COMET-Farm uses inputs including location, historical management practices, crop selection, field management practices and planned changes or interventions to estimate the impact of different agricultural practices on the GHG emissions of agricultural projects. CUF will follow the data collection and entry guidance provided by the COMET-Farm Manual and work with our Transaction Partners to help them use COMET-Farm. The documentation for COMET-Farm can be found here: [COMET-Farm Manual](#).

As we work more with the agricultural industry, we may develop additional methodologies to estimate GHG avoidance outside of COMET-Farm which will be documented, if necessary, in future versions of the QAPP.

Amendments to the QAPP

Amendments to the QAPP are developed and approved to reflect changes in project organization, tasks, schedules, objectives, and methods; to address deficiencies and nonconformances; and accommodate unique or unanticipated circumstances. When amendments to the QAPP are proposed (which may be from Transaction Partners, SHCC, CPCCC or CUF itself), CUF shall document the proposed changes and the reasons for the changes.

CUF agrees to submit all substantive changes to the EPA (including all individuals listed in Section A2) for review and approval, prior to the change being implemented if possible, or otherwise, within 90 days of

such change implementation with the concurrence of the CUF QAM. CUF defines a substantive change/amendment as a change which could materially affect the completeness, accuracy, and reliability of the data submitted to the EPA under the Terms and Conditions of the award. To the extent CUF adopts EPA guidance with respect to any aspect of this QAPP, so long as such adoption does not materially modify EPA's guidance, such changes shall be deemed to be non-substantive amendments.

With respect to non-substantive changes, CUF shall determine what documentation is necessary to appropriately record such amendment. CUF shall send to the EPA (including all individuals listed in Section A2) all such documentation. CUF's submission to EPA shall be considered the official amendment to each such non-substantive change. In each case, amendments are effective immediately upon EPA approval (or notice). Once approved, all changes will remain in effect until the next QAPP revision.

Annual Review and Approval of the QAPP

The QAPP will be reviewed by CUF annually to ensure that all information is still correct and relevant, and if any changes are required, they may be discussed with the EPA QAM and EPA PO. Once the review is complete, it will be certified to EPA as correct and accurate.

The annual reviews must be documented in an email and their accuracy certified; the certification must include any program or project changes which were approved via amendment during the prior year. Any necessary amendments shall be approved by the EPA prior to completion of the annual certification.

Minor administrative changes not impacting data or operations (e.g., organizational changes, schedule changes, etc. not affecting the project design or quality or quantity of work to be performed) that arise during the certification process can also be conveyed as part of the annual certification. CUF will coordinate the review, documentation, and certification of the QAPP, and provide the certification to the EPA QAM and EPA PO 60 days before the annual anniversary date of the QAPP. If the Project is extended beyond the QAPP's approval term, a full QAPP re-approval is required. If the QAPP expires, the environmental information collection work described within this document must be halted.

The QAM will maintain the most current version of the QAPP and ensure that it is passed down to all those stakeholders whose information is collected and reported. After annual re-certification, the most recent version will be distributed, with all prior versions archived for posterity. Should additional versions be approved throughout the year and prior to the routine annual certification, the same process of distribution and archival will apply.

Quarterly Reporting

Subject to any extensions which may be granted in accordance with the Terms and Conditions, CUF will submit transaction-level and project-level data electronically to the EPA PO within 30 calendar days after the quarterly reporting period ends. The four quarterly reporting periods for data submission are as follows:

- a. **Fiscal Year Q1:** July 1 to September 30
- b. **Fiscal Year Q2:** October 1 to December 31
- c. **Fiscal Year Q3:** January 1 to March 31
- d. **Fiscal Year Q4:** April 1 to June 30

The data submissions will cover transactions originated in the preceding quarter. For example, for the quarterly reporting period that ends September 30, CUF will provide information on transactions originated from April 1 to June 30 rather than from July 1 to September 30. Due to the nature of this program, Environmental Information contained in Project Level reporting may be reported in a subsequent quarter from that of the associated Transaction.

For transaction partners and subawards who are required to submit reporting for inclusion in the quarterly report, their reporting requirements will be further outlined and defined in their respective award agreements, but will ensure that there is sufficient time for each partner to review their data and provide attestation prior to submission to CUF, while remaining within the overall EPA reporting deadline requirements.

Given the volume of reporting data anticipated, they will be permitted to report to SHCC, CPCCC, and CUF on a rolling basis; however, all data for the reporting period is generally required to be submitted to CUF no later than 30 days prior to the report due date. This is to allow for sufficient validation testing by CUF prior to the inclusion of their data into the final report and approval by the QAM and Executive Reporting Officer.

A6. Information/Data Quality Objectives and Performance/Acceptance Criteria

CUF's goal is to ensure that information and data generated and collected are as accurate, precise, and unbiased as possible within Project constraints. CUF will use existing data and tools provided by the EPA and other qualified sources to calculate GHG reductions as outlined in Section A5. In some cases, data quality metrics and documentation may not be provided by each source and, as necessary, CUF may consult with subject matter experts to qualify data for use to meet Project objectives.

CUF will document data sources used, and any significant limitations of data or information utilized to ensure that the data/information are appropriate for their intended use. IMM will review the approach for selecting and compiling data; the review will include examination of the data sources and the intended use of the data. The specific QC techniques used will depend on the technical activity or analysis to which they are applied. The CUF IMM and Investment teams are responsible for verifying the usability of data as described further in *Section D2. Usability Determination*.

Data Quality Indicators

Precision

In the context of the GGRF program, precision is a measure of the verifiability and reproducibility of collected data. That is, if multiple independent sources reviewed the source data, the outcome would be the same or very similar. It is not anticipated that this Project will include primary data collection, such as directly sampling the power output of a solar panel. It will, however, include secondary data collection such as determining the maximum power output of a solar panel via its nameplate, specification label, or provided manufacturer specifications.

Precision will be ensured by providing clear instructions on what source documentation is acceptable for collection of secondary data. Additionally, CUF will provide specific guidance on what are acceptable sources of proxy data when exact data is not available.

Generally, existing data and tools provided by the EPA and other qualified sources will be used for Project tasks in analyzing the collected data. These tools, when populated with data, will deliver high precision results based on the provided inputs. If a provided tool is not available, CUF will identify other resources that can be relied upon to provide consistent and replicable results with a high degree of precision. This may include ensuring spreadsheets are configured properly, algorithms are properly tested, and transcribed data is error free. The CUF QAM is responsible for determining the adequacy and consistency of data collected and will work with stakeholders when inconsistencies in data collection are identified to ensure that they are collected and reported to the EPA.

Accuracy

Accuracy is a measure of whether the collected values and outputs represent the known or expected value. For example, if a recipient is collecting the model year of vehicles from loan documentation, there is a chance that data entry errors could create inaccurate results. Moreover, this can expand beyond data entry errors wherein a manufacturer potentially misprints or overrepresents the energy efficiency of an appliance.

CUF will test data for accuracy by sampling a subset of data collected each quarter. Transaction Partners will provide, upon request, supporting documentation for any transactions selected for review by CUF. If CUF discovers inaccuracies in the reported data from any Transaction Partner, CUF may implement additional or heightened sampling of such Transaction Partner data to ensure that there is sufficient confidence in the data reported. CUF may also require refinement in the processes or procedures of such Transaction Partner to increase accuracy.

Representativeness

Representativeness is a qualitative term that expresses the degree to which the data accurately and precisely represents the characteristics of a given project and the associated calculations of emissions. This does not necessarily mean a need for a comprehensive collection of data about a project, just that there is sufficient data to accurately reflect it. CUF will utilize the EPA-provided tools such as calculation methodology and a data dictionary (as reflected in EPA's Information Collection Request documentation) which reflect the majority if not all of the data needed to fulfill representativeness for the priority project categories.

For agricultural projects, CUF intends to utilize COMET-Farm to estimate GHG reductions as described in Section A5. CUF intends to work with Transaction Partners who are already familiar with and utilize COMET-Farm to analyze their operations, giving us confidence that borrowers will be able to provide the information necessary to accurately and precisely represent the project in the COMET-Farm online tool.

Comparability

Comparability is a qualitative term that expresses the measure of confidence that one dataset can be compared to another and can be combined for accurate aggregation purposes. To ensure comparability, data collection efforts, and analytical methods must be standardized across similar projects. This involves collecting data in consistent units (and making the data collector aware of the units). CUF may adopt EPA tools and publicly available tools to provide comparability in the Program.

For purposes of the data collected for input into the GHG calculators, CUF will ensure comparability by clearly following the guidance in the GHG Calculators and data dictionary and as described in **Table 1** to ensure all data is of a consistent and intended value. If CUF adopts alternative tools to estimate GHG reductions, CUF will demonstrate that such tools can ensure comparability such as showing how the output data is similar to the Priority Project Calculators or demonstrating that the results are industry-standard.

Completeness

Completeness is the concept that the scope of the data collection and analysis is holistic. With respect to this Program, this includes all qualified projects and their associated greenhouse gas and co-pollutant reductions (as available via projection modeling). CUF will use the crosswalk document that EPA has provided which shows the current completeness of its provided tools, such as which greenhouse gases and co-pollutants each tool covers. ENERGY STAR Portfolio Manager, DOE Audit Template and COMET-Farm all provide expected greenhouse gas reductions using user inputs. For any GHG Calculators used other than the methodologies outlined in Section A5, CUF will demonstrate that proposed models can predict appropriate greenhouse gas reductions.

Sensitivity

Sensitivity is the uncertainty of analysis and how changes in data can vary in the impact on the outcomes of analysis. With respect to this Program, sensitivity is primarily referencing the materiality of errors associated with analysis and data collection. For example, if someone rounds values in an incorrect way, it could have an outsized impact on the resulting emissions reductions calculation. Another example might be recognizing that the difference between 2015 and 2016 light-duty vehicle emissions is negligible, so a data entry error representing vehicles actually made in 2015, as made in 2016, would not result in a material change to the emissions reductions. This analysis can also be used for grouping sets of project data where assumptions or factors will be used in lieu of specific details. Revisiting the vehicle example, years in which vehicle emissions standards changes did not occur generally result in immaterial emissions reductions regardless of the model year of the vehicle. However, a shift in emissions standards could produce sizeable emissions reduction differences. In this case, we would not combine vehicles spanning across different emissions standards for the purposes of calculating emission reductions.

For each GHG Calculator, CUF will analyze the impact of errors for every input and review data with greater impacts with higher frequency. For example, a transcription error in the Priority Project 1 Distributed Wind Calculator in entering the capacity in kW of 10% (entering 330 instead of 300) results in an approximately 10% increase in the avoided emissions calculations. However, an error in choosing the Region (choosing Southeast instead of Florida) results in a 36% error. Therefore, we would more closely review Region in Quality Assurance. CUF will also provide clear guidance on reasonable assumptions or factors in lieu of primary data as described in **Table 1** or as provided by the EPA and ensure these assumptions do not have an outsized effect on outputs.

In sampling data from Transaction Partners, CUF will flag any errors that cause a greater than 5% difference in GHG emissions calculations. These Transaction Partners may be subject to additional review as outlined in **Table 4**.

A7. Distribution List

The listing in **Table 3** includes staff responsible for implementing independent internal quality assurance as well as staff serving in external oversight roles. This QAPP and, as applicable, all major deliverables will be distributed to the staff presented in **Table 3**. Additionally, this QAPP will be provided to any unlisted staff who are assigned to perform their work under this project. The CUF QAM will maintain all official copies of the QAPP, to include the original version and all revisions, which will be made available to EPA upon request.

A8. Project Organization

The primary personnel responsible for the implementation of this project are outlined in **Table 3** below.

Table 3. Individuals and Organizations Participating in Environmental Information Operations

Name	Organization	Org Position Title	Responsibilities
Tony Costello	CUF	Chief Operating Officer	Serves as CUF's Quality Assurance Executive. Responsible for developing and approving the QAPP and EPA quarterly reports prior to submission to EPA.
Krystal Langholz	CUF	Chief Community Officer	Responsible for overseeing environmental information operations.
Kenery Gallagher	CUF	Chief Compliance Officer	Responsible for overseeing the Compliance team which conducts a portion of the second phase review
Michael Grossman	CUF	Chief Investment Officer	Responsible for overseeing the Investments team, which coordinates with Transaction Partners, including overseeing identifying specific data collection requirements from Table 1 or Table 2 for individual investments during the due diligence phase.
	CUF	Vice President, Enterprise Risk <i>Interim Quality Assurance Manager (QAM)</i>	Oversees the CUF QAM. Responsible for independent and objective validation of information within the QA program and working with CUF management when QA issues are identified to ensure their remediation.
	CUF	Director, Impact Measurement & Management	Responsible for conducting or supporting environmental information operations.

Name	Organization	Org Position Title	Responsibilities
To Be Hired	CUF	Sr. Officer, Quality Assurance Project Quality Assurance Manager (QAM)	Responsible for planning, documenting, coordinating, and assessing effectiveness of the QAPP. Responsible for developing, proposing and documenting any needed amendments to the QAPP. Manages/oversees the QA program within CUF.
	SHCC	GGRF Compliance Manager	SHCC's primary quality assurance liaison. Responsible for ensuring that the data coming from SHCC is complete, accurate, and submitted timely to CUF for inclusion into its reports.
	CPCCC	Head of Program Strategy and Compliance	CPCCC's primary quality assurance liaison. Responsible for ensuring that the data coming from CPCCC is complete, accurate, and submitted timely to CUF for inclusion into its reports.
	US EPA	EPA Project Officer	Responsible for overall grant management on behalf of the EPA.
	US EPA	EPA Quality Assurance Manager	Responsible for approving QAPP on behalf of the EPA.

Chief Operating Officer

Tony Costello, CUF's Chief Operating Officer, is the QA program's executive leadership authority for CUF and will approve this QAPP on behalf of CUF. Tony will ensure CUF has adequate resources to develop and enforce this QAPP, including knowledgeable personnel, funding, materials, supplies, and time. Tony will also oversee staff who are responsible for day-to-day quality assurance activities related to specific transactions. He will maintain close communications with staff and ensure any difficulties encountered or proposed changes at the task level are reviewed for implications on other similar or related tasks. Tony is also responsible for ensuring the consistency of similar or related QA measures across transactions.

The COO is also responsible for communicating progress or difficulties encountered (across all tasks under this QAPP) to the EPA PO, who provides EPA's primary oversight function for this project at EPA OGGRF and is responsible for managing the review and approval of this QAPP and any future revisions. The COO (with support from various staff members and teams) will be responsible for consulting with the EPA PO on planning, scheduling, and implementing the QA/QC for all project deliverables and obtaining required EPA approvals.

Chief Community Officer

Krystal Langholz is CUF's Chief Community Officer and provides executive leadership for the Impact Measurement and Management (IMM) team. CUF's IMM team is responsible for designing reporting forms and associated guidance on data fields to align with EPA and industry best practices, checking the quality of the data fields, leading the creation of training and technical assistance tools for transaction partners and helping CUF interpret all reported data.

Chief Compliance Officer

Kenery Gallagher is CUF's Chief Compliance Officer and will be responsible for overseeing the Compliance team conducting second-phase review of data collected under this process, including ensuring that input data matches source documentation. For more details on second-phase review, see **Table 4**.

Chief Investment Officer

Michael Grossman is CUF's Chief Investment Officer and is responsible for evaluating the investments that CUF makes to achieve the Project's objectives. During the due diligence process, the Investments team will determine which GHG Calculators may apply to the investment and ensure the Transaction Partner is aware of data and documentation that must be provided in accordance with this QAPP. The Investments team is responsible for conducting the first phase of review for CUF-originated investments. For more detail on first-phase review, see **Table 4**.

Vice President, Enterprise Risk

The VP, Enterprise Risk, _____ will oversee the daily operations of CUF's quality assurance program. The CUF QAM will report directly to him on all QA program and reporting matters, and he will work with the CUF QAM on ensuring that CUF is meeting its reporting obligations with EPA. He will ensure that the third phase of assurance is conducted in an independent and objective manner prior to report submission, and that any inconsistencies or gaps identified in reporting are communicated to management and coalition partners and subsequently remediated. _____ will function as the CUF Interim QAM.

Director, Impact Measurement & Management

The Director of Impact Measurement & Management (IMM), _____ is responsible for the calculation of GHG emissions reductions using GHG Calculators. _____ team are responsible for ensuring that quality procedures are implemented at the transaction level and for maintaining **Table 1**, **Table 2** and other guidance on the collection of environmental data. The IMM Team will discuss any concerns about quality or any proposed revisions to task-level QAPP content with the CUF QAM to identify, resolve, or preclude problems or to amend task-level plans, if necessary. In addition, the IMM team will work with the COO, VP of Enterprise Risk, and the CUF QAM to identify and implement quality improvements.

Sr. Manager, Quality Assurance/Quality Assurance Manager

The Sr. Manager, Quality Assurance will serve as CUF's officially designated CUF QAM. They will serve as the data quality assurance expert at CUF. They will be responsible for overseeing the Program's quality assurance program, monitoring, facilitating QA activities on tasks, and helping the COO, VP of Enterprise Risk, and other CUF staff to understand and comply with EPA QA requirements.

Under the direction of the CUF's VP, Enterprise Risk, the CUF QAM is responsible for conducting periodic independent quality assurance validation, and audits of this project's QA program. CUF's QAM will be responsible for the final sampling and validation of data prior to the submission of the quarterly report to the EPA.

As part of the QA process, they will be expected to produce written documentation of the evaluation's results, highlighting key weaknesses or findings and related recommendations to management. CUF's QAM will work closely with the COO and VP, Enterprise Risk to implement the data quality assurance program, to also include training and coordination to other CUF staff and coalition partners on QA best practices, how to successfully implement CUF's QA program and comply with the QAPP, and working with all related parties to remediate any deficiencies noted during these audits.

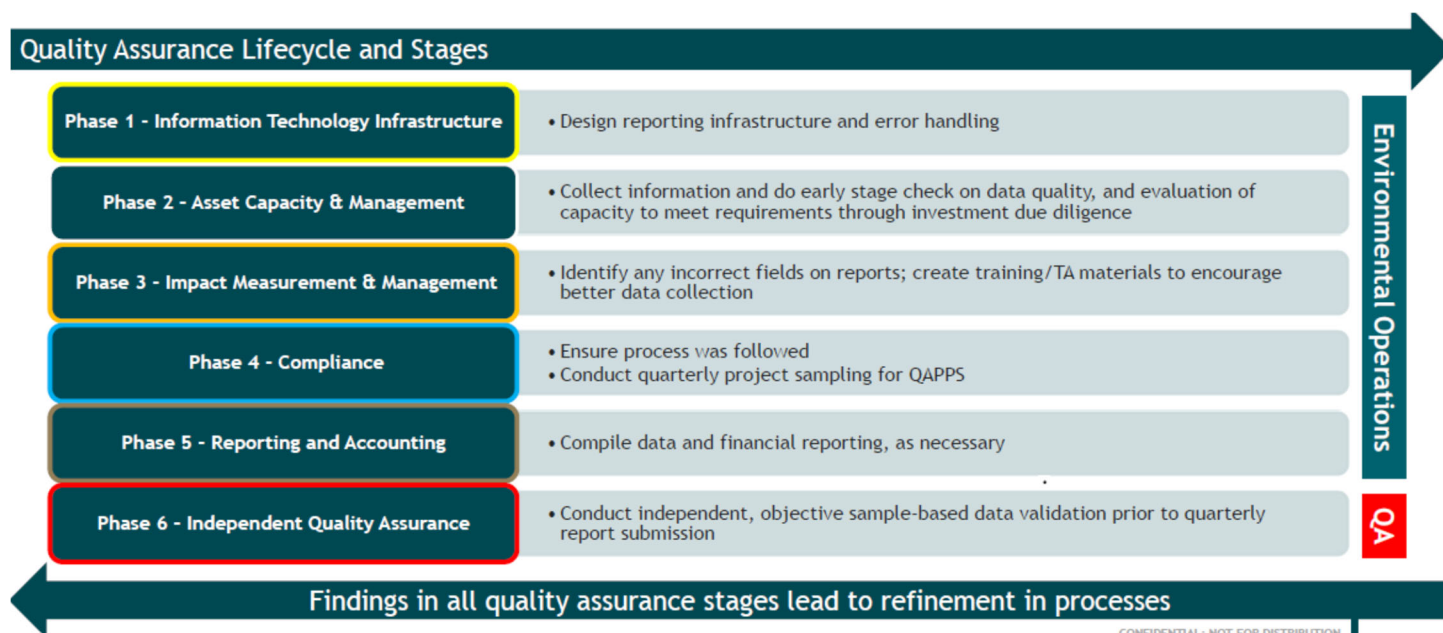
A9. Quality Assurance Manager Independence and Objectivity

The CUF QAM reports directly to the VP, Enterprise Risk. The Enterprise Risk department serves as an independent and objective department within CUF that is responsible for assisting CUF in identifying and mitigating risks across the organization, overseeing its internal audit function, and maintaining the data quality assurance program. As such, the QA program is designed in a way that the CUF QAM does not directly implement other aspects of the QA program, as their primary responsibility is to provide validation of the QA process across its various phases.

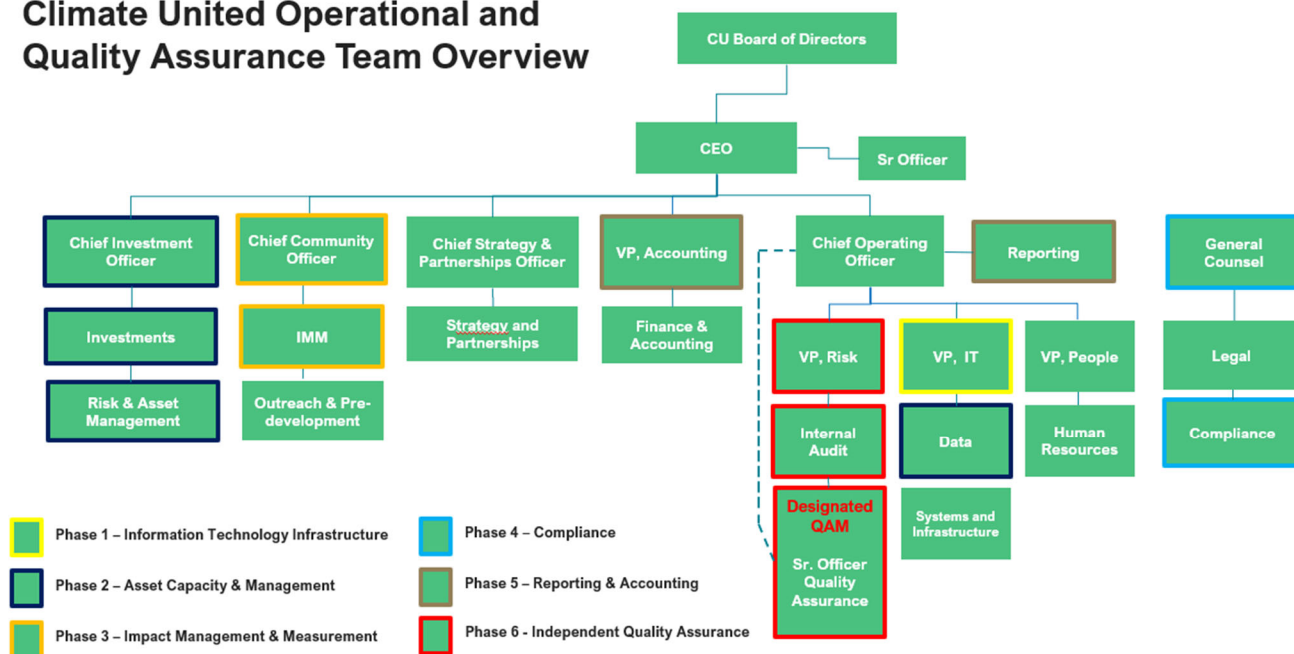
A10. Project Quality Assurance Lifecycle, Organization Chart, and Segregations of Duty

Exhibit 1 provides visual representations of the quality assurance lifecycle, and an organizational chart outlining the segregations of duty inherent in the quality assurance program established among all project participants identified in **Table 3**. **Exhibit 1** shows the independence of the project CUF QAM from the project participants and environmental information operations who participate in all other phases of the quality assurance process.

Exhibit 1. Project Organization Chart⁴



Climate United Operational and Quality Assurance Team Overview



⁴ Under CIO 2105-S-02.0, section 3, the organization chart must also identify any contractor relationships relevant to environmental information operations.

Communication Procedures

CUF's QAM will oversee the development, implementation and maintenance of our quality management program within CUF. We will maintain clear lines of communication to efficiently address any issues as they arise. Any discrepancies or errors will be promptly documented and communicated to the appropriate parties within CUF and at the EPA, as necessary.

A11. Personnel Training / Certification

All staff at each of CUF, CPCCC and SHCC who are essential for implementing the QA program, and have substantial involvement in the collection, input, review, and validation of the data submitted in the EPA's quarterly reports, shall have appropriate technical and QA training to properly perform their assignments. The CUF QAM, will complete [EPA's Training Courses on Quality Assurance and Quality Control Activities](#), and will provide training and guidance to other CUF staff and CPCCC and SHCC staff as appropriate. The CUF QAM will maintain proof of training/certification for the EPA PO.

If additional training is required, the CUF QAM will identify available training resources and incorporate the required training into the project schedule. It is expected that all subs, whether directly managed by CUF, or through CPCCC and SHCC will be provided training on EPA quality assurance and quality control activities.

A12. Documents and Records

CUF's QAM is responsible for maintaining a copy of all file records in accordance with the [EPA Records Schedule 1035ab](#). Project files will be retained by CUF in accordance with the grant agreement's document retention requirements.

B1. Identification of Environmental Information Operations

Environmental information operations relates to the collection, production, evaluation or use of environmental information by or for EPA, and the design, construction, operation or application of environmental technology. For the purposes of GGRF, environmental information operations encompasses the collection of data that is required to complete emissions reductions calculations, analysis of that data, and the subsequent reporting of that data to EPA.

CUF's definition of environmental information is based on data elements required to produce outputs in GHG Calculators, including the Priority Project Calculators, Portfolio Manager, COMET-Farm, or other appropriate methodologies.

This definition of environmental information is static for CUF's period of performance unless we change our methodology, in which case we will submit a revised QAPP for EPA review and approval.

B2. Methods for Environmental Information Acquisition

Transaction Partners will generally be collecting secondary data from existing sources such as loan documentation, project specifications, and manufacturer representations. The methods by which this information will be collected, including what will be collected, who will collect it, how they will collect it, and where that methodology is documented as described below.

- **What data will be collected and from where?**
Please see **Section A5. Project Task Description** for a description of which data elements will be collected and from what documentation.
- **Who will be collecting the data?**
Please see **Section A8. Project Organization** for a description of the organization structure of data collection where the individuals or entities collecting the data are defined.
- **How will the data be collected?**
CUF plans on developing standardized tools, templates, and resources to assist Transaction Partner's data collection, analysis, quality control/assurance, and sharing.

All CUF investment decisions are made in alignment with our workplan, approved by the EPA in December 2024. The investments undergo rigorous internal due diligence prior to approval to ensure that the investments selected for funding are expected to achieve the objectives in the approved workplan.

B3. Integrity of Environmental Information

All parties that directly interact with environmental data at any point ahead of submission to the EPA must have their designated quality assurance managers formally attest to the accuracy and quality of their data inputs by signing a data attestation document that will be attached when transferring data to its next owner:

1. Transaction Partners will deliver environmental data to any of CUF, SHCC or CPCCC, as applicable, and data will be accompanied by an attestation document or statement;
2. Each of SHCC and CPCCC will send both its attestation, and the attestation of its Transaction Partners received in Step 1 above when submitting data to CUF. The attestation document or statement from SHCC or CPCCC, as applicable, will confirm that data and the process to collect and transform said data comply with CUF's QA program.
3. CUF will include a data attestation document or statement to the EPA with the corresponding quarterly report and will maintain copies of attestation documents from each of CPCCC, SHCC and each direct Transaction Partner of CUF. CPCCC and SHCC shall maintain copies of attestations of each of their Transaction Partners which will be available for review by CUF or EPA upon request.

CUF's attestation document will include the Transaction Partner's, CPCCC's or SHCC's confirmation that they have completed key quality assurance activities detailed in **Section A6** and **Section B4**, such as completeness checks, sensitivity analysis, accuracy reviews, representativeness analysis, and desk reviews. Additionally, CUF direct Transaction Partners, CPCCC, and SHCC will be required to make available, all supporting documentation of applicable activities, such as loan documents, project

descriptions, data review reports, and any corrective actions taken to ensure data quality. These attestations emphasize the critical role of data integrity throughout the reporting process, emphasizing the need for accurate, complete, and validated data that supports effective decision-making and regulatory compliance.

Given the amount of documentation expected to serve as backup for all of the various transactions under the program, and the expected storage size of the data, original source documentation will reside at the transaction level, with CPCCC, SHCC and CUF having access to the data to run the calculators and verify information. Copies of documentation attestations will reside with CPCCC and SHCC for their subs, and all attestations will roll up and also be stored with CUF to attest to the validity and accuracy of the underlying data submitted.

For all original source documentation, transaction partners will be expected to provide a safe and secure electronic storage system at their organization. CUF will have read-only access to this documentation in order to facilitate its data integrity and quality assurance reviews. Files may only be saved/downloaded by CUF with prior approval from the transaction partner. Likewise, any documents downloaded by CUF will be placed in its own safe and secure electronic storage system with restricted file access for only those staff with a need to review them.

B4. Quality Assurance

A “Three-Lines of Assurance Model” will be implemented as part of our Quality Assurance program. This model is adapted from the Committee of Sponsoring Organization’s (COSO) Three Lines of Defense Model typically used within the internal audit profession. The COSO framework is a well-respected, widely used internal control framework that seeks to build trust and confidence in public disclosures, ESG/sustainability reporting, and enterprise risk decision-making. The objective of the quality assurance model outlined below is to ensure adequate review and control over the accuracy and integrity of data provided to the EPA. In doing so, the following steps are taken to ensure the accuracy and integrity of the QA process:

Table 4: Quality Assurance Procedures

First Line of Assurance – Data Collection and Entry	
Performed By	CUF Investment Staff and CPCCC and SHCC (with respect to each organization’s funded qualified projects)
Review Frequency	Continuous. As data is received, 100% of data is confirmed to be complete and consistent with expected values.
Reviewed Actions	<ol style="list-style-type: none"> Completeness checks — To ensure that inbound environmental information is received from all reporting entities and that each data submission contains a complete data set based on the type of transaction and benefit calculation methodology. Data-Type Validations – To ensure that environmental information data received is consistent with expected values outlined in Table 1 and Table 2 (e.g., expected numerical inputs are not text strings). Data Limitations and Assumptions – Any data collection limitations or assumptions are noted in accordance with Section A5.

Second Line of Assurance – Data Input Review and Output Calculations	
Performed By	Step 1 Input Review: Compliance Step 2 Output Benefit Calculation: IMM
Review Frequency	Continuous. As data is received, the Compliance and IMM teams perform sampling exercises and GHG calculations.
Review Actions	<p>Compliance: As data is received, a representative data sample is reviewed to confirm that data is consistent with the expected inputs. Percentage of data sampled may be weighted upon factors including without limitation new Transaction Partners, new transaction types, sophistication of Transaction Partners, and prior experience or track record of Transaction Partners.</p> <ol style="list-style-type: none"> 1. Data Accuracy – Confirm that data is transcribed accurately from the applicable source into CUF’s data repository. 2. Completeness – Confirm that datasets are complete within the repository. 3. Documentation – Confirm data sources are properly documented. <p>CUF IMM: As data is received, CUF IMM team performs 100% of all benefit calculations and checks for data reasonability.</p> <ol style="list-style-type: none"> 1. Limitations and Assumptions – Note any data limitations or assumptions. 2. Output Completeness – Confirm completeness of calculations, or other benefit methodology outputs, including no errors in the benefits data. 3. Reasonableness – Evaluate final benefit calculations for reasonability including both inputs and outputs across data fields.
Third Line of Assurance – Data Output and Reporting Assurance	
Performed By	CUF QAM
Review Frequency	Quarterly: Sample-based testing and re-calculation of benefits data prior to submission of required reporting to the EPA
Review Actions	<ol style="list-style-type: none"> 1. Benefit Output Validation – To evaluate the accuracy of the GHG calculations, calculator or other methodology outputs will be checked by repeating each calculation, independently, and comparing the results to the preliminary review; any data entry and calculation errors will be identified and corrected 2. Reporting Accuracy and Validation – Review sample of reporting outputs for consistency with underlying documentation and benefit calculations 3. Completeness – Review report to understand whether the report appears populated with all relevant information; where gaps may exist and that gaps are appropriately documented and justified

	4. Compliance – Ensure compliance with the process outlined in this QAPP.
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Completeness & Data-Type Validations

To assure data completeness and consistency, CUF or the designated party, will use an automated process in each organization's respective data and reporting system to confirm that data is not missing from required fields or outside of the expected values outlined in **Table 1** and **Table 2**. Should reporting data be incomplete, each entity will complete the missing data field prior to report submission. In the event that environmental data is outside of the anticipated values outlined in Table 1 and Table 2, each entity will complete a manual review of the data point to ensure consistency with the underlying documentation and correct any deficiencies.

Data Accuracy & Documentation

To assure data accuracy and proper documentation, CUF or the designated party will complete a quarterly review of environmental information and underlying documentation outlined in **Table 1** for completeness, accuracy, and compliance using the approaches below. This review includes verification that the reported environmental data is consistent with the underlying documentation or approved QAPP calculation methodology.

The sample size and makeup will be determined each quarter by the QAM when reviewing the population set for that particular quarter. An analysis of the type of data, volume, total value, etc. will be reviewed to determine the review sample size and methodology. The quarterly report will outline the key information, criteria, and assumptions made used to justify the sample size and methodology. Evaluation methods for the review may include:

1. *Climate United Manual Reviews*
 - a. *Random Sampling*: CUF will set a minimum random sample for environmental review based on the product population and associated industry standards.
 - i. The sample size may be determined using a variety of factors, such as: new Transaction Partners, new transaction types, sophistication of Transaction Partners, or prior track record. Sampling will give every loan within the selected population an equal chance to be selected for review
 - b. *Targeted Sampling*: CUF will sample loans on a non-random basis based on certain risks such as trends of defects, financial or reputational risk of the investment, or from a particular Transaction Partner or product type.
2. *Transaction Partner Reviews*
 - a. CUF may rely on reviews completed by SHCC or CPCCC in which CUF will "review the reviewer." This process includes auditing a sampling of their reviews to validate accuracy and completeness of the third-party's work including:
 - i. Ensuring that guidelines were applied consistently in all reviews.
 - ii. All reviews have consistent terminology, finding severity per defect type, and result reports.

Transaction partners will be required to review the QC results and remedy all defects. Any potential material defects will be cured and corrected for reporting purposes. All significant or material defects,

such as eligibility or fraud defects, will result in removal from the program and a reconciliation and remediation of affected grant funds in accordance with award terms and conditions.

B5. Instrument/Equipment Calibration, Testing, Inspection, and Maintenance

This section of the QAPP Standard is not relevant for CUF's project, as all environmental information operations conducted for this project will involve indirect measurement data.

B6. Inspection / Acceptance of Supplies and Services

This section of the QAPP Standard is not relevant for CUF's project, as all environmental information operations conducted for this project will involve indirect measurement data.

B7. Environmental Data Protection and Information Management:

CUF follows Calvert Impact, Inc.'s Data Backup and Retention Policy, which establishes requirements for the secure and ethical management of information, and which has been approved by EPA. It includes data retention requirements, guidelines and requirements for accessing and protecting sensitive information including Personally Identifiable Information (PII) and data backup requirements.

All project and data files will be stored on servers with CUF, CPCCC or SHCC. CUF will establish organizational protocols surrounding where files are saved, standard naming conventions and version control to ensure that data is properly maintained in a usable format. The CUF QAM will ensure that the relevant staff are trained to adhere to such protocols.

For any sensitive information (i.e. personally identifiable information) that is gathered under the Project, CUF will promptly destroy such data as soon as it is permitted to do so. CUF does not anticipate gathering significant amounts of sensitive information in connection with this Project. CUF will follow EPA-recommended methods of document destruction.

All computer operating systems will update to Windows 11, as Microsoft will phase out support of Windows 10 and other legacy systems on October 14, 2025. All stakeholders storing and reporting data will be required to upgrade to Windows 11 to better ensure the integrity of reporting and provide for:

- **Enhanced Security:** Advanced security features to protect against malware and cyber threats.
- **Improved Performance:** Optimized for faster processing and smoother multitasking.
- **Futureproofing:** As Windows 10 will eventually reach its end-of-life in during this QAPP version, upgrading to Windows 11 will ensure continued updates and support.

At this time, special hardware or software use is not anticipated. General software available through the Microsoft Suite including Excel, PowerPoint, Access, Word, and other off-the-shelf systems will be sufficient to perform the work. Should CU consider specialized data collection/reporting tools or software, ensuring the integrity and security of data, information confidentiality, and backup and

storage requirements will be key requirements for any system; and included as part of the evaluation scoring criteria at the procurement and vendor selection stage.

C1. Assessments and Response Actions

CUF is committed to completing the tasks outlined in this QAPP. The QA program includes periodic assessments of data files and draft deliverables to measure the performance effectiveness of the QA system. Assessments may also be used as an investigative tool where problems are suspected.

The CUF QAM is responsible for determining whether the quality system established for the project is appropriate and functions in a manner that ensures the integrity of all work products and will provide day-to-day oversight of the quality system. Periodic project file reviews will be carried out by the CUF QAM to verify that required records, documentation, and technical review information are maintained in the files.

If corrective response actions are required, the essential steps in the QA program are as follows:

1. Identify and define the problem.
2. Assign responsibility for investigating the problem.
3. Investigate and determine the root cause of the problem.
4. Identify the department and/or individual(s) responsible for implementing appropriate corrective actions.
5. Implement the corrective action.
6. Independently verify that the corrective action has reduced the likelihood of similar issues occurring in the future.

Corrective actions for errors found during quality checks will be determined by the CUF QAM, in consultation with the VP, Enterprise Risk, to ensure that suggested corrective actions will adequately address the concerns identified, and that the suggested response is relevant and actionable. The originator of the work will make the corrections and notify the CUF QAM when the errors are corrected so that the remediation actions can be confirmed. Depending on the severity of the deficiency, the CUF QAM can suggest that any additional work, or other data collection, stop so that any potential weaknesses are not applied to other data or otherwise compounded until the cited deficiency is resolved. Deficiencies identified and their resolution will be documented in the quarterly project reports, as applicable. The CUF QAM and VP, Enterprise Risk will respond to and serve as the audit coordinators for all internal and EPA audits on the project, as needed.

C2. Oversight and Reporting to Management

CUF shall review their approved QAPP at least annually to determine whether the procedures outlined in the QAPP are still relevant, identify where systems, policies, and procedures may have changed to make the reporting process more reliable and efficient, and to ensure that the required data collection and GHG Calculators are still applicable. These documented reviews shall be made available to the EPA, if requested.

If significant changes are made to the Quality Assurance Program that could materially affect the performance or reliability of environmental information operations, it may be necessary to re-submit the QAPP to EPA for formal re-approval. In general, a copy of any QAPP revision(s) made during the year should be submitted to the EPA PO and EPA QAM in writing when such changes occur. Should issues be identified which require immediate attention/resolution with the EPA, CUF will communicate these concerns and proposed actions with the EPA PO and EPA QAM.

During the quarterly reporting process, the CUF QAM will meet with the Chief Operating Officer and VP, Enterprise Risk to ensure the project meets its milestones and that the resources committed to the project are sufficient to meet Project objectives. Any QA issues potentially impacting the quality of a deliverable, the project budget, or schedule will be discussed with the COO and CUF management, as appropriate.

D1. Environmental Information Review

As part of CUF's standard operating procedures, information (retrieved and generated) will be verified and validated through a review of data files by the Enterprise Risk department and CUF QAM, an independent, objective department within CUF tasked with evaluating the overall effectiveness of the organization's internal controls and data quality assurance. Ultimately, CUF's COO, as the corporate executive overseeing the Enterprise Risk and QA functions, reviews, signs, and submits performance reporting electronically to the EPA Project Officer. This documented review process will be stored with the deliverables for the project.

The CUF QAM is responsible for assisting CUF staff with understanding the reporting and documentation requirements necessary to conduct the day-to-day technical activities of tasks, including planning, data gathering, documentation, reporting, and controlling technical and financial resources. The CUF QAM is the primary person responsible for validating the quality of reporting submitted to the EPA under this project. The objective of the CUF QAM is to ensure that CUF staff are collecting, calculating, documenting, and reporting data to the EPA in a manner that another reasonable and prudent person could review and draw the same conclusion as to the information contained in CUF's reports.

Reviews of analyses will include a thorough evaluation of collected and calculated values. All original and modified data files will be reviewed for input, handling, and calculation errors. Additionally, all measurement units will be checked for consistency. Any potential issues identified through this review process will be evaluated, errors corrected, and analysis repeated using the corrected data. All corrections will be documented in project records.

Data validation reviews will include a sample of data sets to check for the following:

- Data sources are clearly documented.
- Calculations are appropriately documented and in accordance with the agreed-upon calculators.
- All relevant assumptions appear justified and are clearly documented.
- Conclusions are relevant and supported by results; and
- Text is well-written and easy to understand.

For all data validation conducted, the following supporting documentation will be saved for posterity so that any party may conduct its own independent validation, or re-validation of the CUF QAM's conclusions:

- A copy of the raw data set population, containing all data consolidated from CUF, CPCCC and SHCC's staff.
- A copy of the selected sample used to conduct the data validation, and to understand where data validation may have failed to identify key QA issues, if identified later.
- A brief description of the sampling methodology used to ensure a statistically significant sample is selected, and any key subjective assumptions which may have been made when selecting the sample.
- A copy of the workpapers used to test the validity and accuracy of the sample.
- A summary report of any errors, or QA weaknesses identified and related recommendations/improvements for management which may require follow-up or resolution.
- A copy of the final report submitted to the EPA PO and EPA QAM.
- The final submission documentation, including signatures and date of submission.

D2. Usability Determination

Data usability is determined by multiple factors, including the type, quality and quantity of data. CUF will evaluate each of these factors to ensure that our data is useable for all intended purposes internally and externally.

Type

The environmental data necessary to generate accurate GHG calculations using GHG Calculators, as described in Section A5 and **Table 1** and **Table 2**, are appropriate types based on EPA guidance and industry standards. As industry standards change and additional information is available, CUF will adjust accordingly to ensure we are collecting the appropriate data for use in our GHG Calculators.

Quality

As described in the QAPP, CUF has a robust Quality Assurance process to ensure we have accurate, precise inputs into our GHG Calculators. This ensures quality data.

Quantity

CUF acknowledges that it will take some time to build a portfolio of projects which will generate a sufficient volume of data to ensure data usability. However, by focusing our investments in priority categories, we will more quickly accumulate a suitable volume of data across sectors to inform evaluation and review.

Evaluation & Communication

CUF's IMM and Investments teams are responsible for evaluating the usability of data using the criteria above. IMM and Investments will communicate to internal stakeholders on CUF's data usability, including any identified deficiencies or limitations, in order to refine and improve the Project. CUF will report data to the EPA in accordance with the QAPP and other requirements as defined in the Terms and Conditions. Finally, our data and our analysis of the same will be reported to external stakeholders

in order to refine and improve our products and contribute to the market transformation outlined in our workplan.

Table 1. Priority Project Calculators Project Task Descriptions

Data Element	Unit(s)	How data will be collected / calculated
Priority Project 1 – DISTRIBUTED ENERGY		
Solar Capacity	kW	<p>Expected capacity can be identified in initial project scope documents, installation contracts, or permitting / utility interconnection forms.</p> <p>If this data is not readily available, users should leverage industry and regional standard estimates of distributed solar system cost, such as NREL’s Annual Technology Baseline Data, to back-calculate capacity from total project cost.</p> <p>Capacity will be reported using the maximum power (Pmax), also known as the nameplate capacity, as tested under Standard Testing Conditions (STC).</p>
Distributed Wind Capacity	kW	<p>Nameplate capacity can be identified in initial project scope documents or permitting / utility interconnection forms.⁵</p> <p>If this data is not readily available, users should leverage industry and regional standard estimates of distributed wind system cost, such as NREL’s Annual Technology Baseline Data, to back-calculate capacity from total project cost.</p>
Battery Storage	Yes/No	<p>Selection of “Yes” if the contractor scope of work, project design documentation, loan documentation, bills of sale, or other documentation definitively indicates that a battery storage system is contractually obligated to be installed as part of the project.</p>
Region	Type	<p>Geospatial regions to be selected based on definitions in the EPA AVERT User Manual (AVERT User Manual (epa.gov)) or the expanded list provided in the Priority Project 1 Calculator. Data must be gathered via traceable geolocation data such as physical address location, GPS coordinates, city, or county so long as the borders of the chosen geolocation data can definitively remain within an established geospatial region as defined above. Traceable geolocation data may be obtained from the contractor’s scope of work, project design documentation, loan</p>

⁵ <https://windexchange.energy.gov/small-wind-guidebook>

Data Element	Unit(s)	How data will be collected / calculated
		documentation, bills of sale, or other documentation that indicates a project's location.
Priority Project 2 – NET-ZERO BUILDINGS		
Electricity Use Efficiency		
Project ZIP Code	5-digit ZIP Code	<p>The ZIP code will be pulled from the contractor's scope of work, project design documentation, loan documentation, closing disclosures, notes, deeds of trust, bills of sale, or other documentation that indicates a project's ZIP code.</p> <p>Otherwise, the ZIP code will be determined by entering the address of the project site in the United States Postal Service's tool.</p>
Expected Percentage Energy Efficiency Improvement	Percentage (%)	<p>Expected energy efficiency improvement may be provided from an energy audit/assessment, especially if the audit is American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Level II or Level III. Users may also use estimates associated with industry standard certifications (such as ENERGY STAR certifications, DOE ZERH Certifications, ZERH PV-Ready Checklist, or documentation showing full electrification).</p> <p>If estimates are not readily available, users should input 20%, which is the minimum targeted energy efficiency improvement per CUF's workplan.</p>
Average Annual Energy Consumption	Kilowatt-hours (kWh)	<p>Average annual energy consumption may be estimated by averaging the last three to five years of consecutive annual energy consumption (excluding outlier years as appropriate, e.g., consider excluding 2020 to reflect the impact of COVID on commercial buildings, vacancy periods). This can be found in the monthly energy bill or account summary provided by the local utility.</p> <p>If primary data from energy bills is not readily available, users may leverage project-specific estimates, such as HERS reports, or industry-standard sources, such as the Energy Information Administration's Residential Building Energy Consumption Survey (RECS), Commercial Building Energy Consumption Survey (CBECS), or the National</p>

Data Element	Unit(s)	How data will be collected / calculated
		<p>Renewable Energy Laboratory’s ResStock and ComStock models to estimate average annual energy consumption.</p> <p>Further, users may leverage models that rely on these data sources to obtain more granular, tailored estimates of average annual energy consumption.</p>
Lighting Update		
Project ZIP Code	5-digit ZIP Code	<p>The ZIP code will be pulled from the contractor’s scope of work, project design documentation, loan documentation, bills of sale, or other documentation that indicates a project’s ZIP code.</p> <p>Otherwise, the ZIP code will be determined by entering the address of the project site in the United States Postal Service’s tool.</p>
Average Bulb Usage Per Day in Hours	Hours (h)	<p>For non-residential properties, average bulb usage per day will be estimated based on an estimate of operating hours. For residential properties, if precise information is not readily available, estimates will developed using the Department of Energy’s Residential Lighting End-Use Consumption Calculator. The geographic region of interest will be mapped at the most granular level possible (i.e., first preference is state-level, followed by regions. “Daily Lamp-HOU per Household” would be reported.</p> <p>Additionally, users may leverage reputable studies, such as the Residential Lighting End-Use Consumption Study to inform entry.</p>
Energy Usage of New Bulbs Watts (W)	Watts (W)	<p>Users should enter data from manufacturer packaging.</p> <p>If primary data is not readily available, users should leverage industry databases or reputable sources, such as the Department of Energy, to estimate, on average, the wattage of new bulbs.</p>
Number of New Bulbs	Quantity	<p>Depending on the building type and size, this may be collected by consulting the building’s lighting inventory manual (e.g., for commercial / industrial buildings).</p> <p>For residential properties, if exact light bulb counts are not readily available, residential building estimates will pull from the U.S. Department of Energy’s “Residential Lighting End-Use Consumption Study.” The geographic</p>

Data Element	Unit(s)	How data will be collected / calculated
		<p>region of interest will be mapped at the most granular level possible (i.e., first preference is state level, followed by regions). The “Number of Lamps per Household” field would be reported.</p> <p>Otherwise, the total number of new bulbs may be back-calculated from the total project cost, using well-founded estimates of equipment and labor costs.</p>
Energy Usage of Bulbs Being Replaced	Watts (W)	<p>Wattage ratings may be determined by examining the number printed on the base of the light bulb or in the user manual. If fixtures contain multiple bulbs/lamps (e.g., two or more fluorescent bulbs or LED tubes), only enter the actual wattage (not equivalent wattage/lumens) of a single lamp/bulb.</p> <p>If primary data is not readily available, users should leverage industry databases or reputable sources, such as the Department of Energy, to estimate, or average, the wattage of bulbs being replaced.</p>
Number of Old Bulbs	Quantity	See approach for “Number of New Bulbs” above.
HVAC Update / Grid-Controlled HVAC		
Efficiency Unit for New HVAC System	Type	<p>If the new equipment has already been identified, the energy efficiency rating may be found on the brand’s website in the product description or on online specifications sheets connected to the product page. Individual products can also be looked up by model numbers using the DOE Compass Consumer Products tool or the ENERGY STAR Product Finder.</p> <p>If a specific product has not been identified or data is not readily available, a proxy product may be identified in either tool or by averaging the efficiency of an applicable system type (e.g., air source heat pumps) for a database of available products.</p>
Efficiency of New HVAC System	Percent (%)	
Efficiency Unit for HVAC System being Replaced	Type	<p>Depending on the age of the HVAC system being replaced, this can be found on the rating tag and energy guide on the HVAC unit itself, in the owner’s manual, or potentially on the brand’s website in the product</p>
Efficiency of Old HVAC System	BTU/watt-hr	

Data Element	Unit(s)	How data will be collected / calculated
		<p>description or on online specifications sheets connected to the product page.</p> <p>If a specific product has not been identified or data is not available, a proxy value may be identified in either tool or by averaging the efficiency of an applicable system type (e.g., natural gas boiler) from a database of available products.</p>
Electricity usage of old air conditioning unit	Watts (W)	<p>If primary data from energy bills is not readily available, users will leverage project-specific estimates, such as HERS reports, or industry-standard sources, such as the Energy Information Administration's Residential Building Energy Consumption Survey (RECS), Commercial Building Energy Consumption Survey (CBECS), or the National Renewable Energy Laboratory's ResStock and ComStock models to estimate average annual energy consumption.</p> <p>Further, users may leverage models that rely on these data sources to obtain more granular, tailored estimates of average annual energy consumption.</p>
Is the system heating, cooling, or both?	Type	<p>If the new equipment being installed is an air source heat pump, assume both.</p> <p>Otherwise, the user should estimate using situational context (project cost, location, supporting documentation) to inform the decision.</p>
Do you have efficiency of old HVAC System Available?	Yes / No	Where equipment efficiency values are not available, the Calculator uses the Department of Energy's Better Building Equipment Efficiency Default Values.
Old Equipment Efficiency Value	Type	
Fuel used in old HVAC	Type	Fuel type may be denoted on a label on the equipment itself or the owner's manual. Maintenance logs or visual inspections may be considered if other sources are not readily available. Otherwise, the user should assume the fuel used in old HVAC is natural gas.
Annual consumption of old unit fuel	Gallons OR Cubic feet	This may be calculated based on information provided in monthly energy bills or account summary provided by the local utility or fuel supplier.
Average annual usage of air conditioning	Hours (h)	

Data Element	Unit(s)	How data will be collected / calculated
Average annual energy consumption of old HVAC System	Kilowatt-hour (kWh)	<p>An estimate for annual usage in hours will be multiplied by the capacity of the old HVAC system (see above for explanation of how these values will be calculated).</p> <p>If primary data from energy bills is not readily available, users will leverage project-specific estimates, such as HERS reports, or industry-standard sources, such as the Energy Information Administration's Residential Building Energy Consumption Survey (RECS), Commercial Building Energy Consumption Survey (CBECS), or the National Renewable Energy Laboratory's ResStock and ComStock models to estimate average annual energy consumption.</p> <p>Further, users may leverage models that rely on these data sources to obtain more granular, tailored estimates of average annual energy consumption.</p>
What is the expected efficiency improvement from grid interactive system?	Percentage (%)	Leverage Grid-interactive Efficient Buildings technical reports or other industry-standard research to inform the expected efficiency improvement.
Do you have efficiency of old water heater system if available?	Yes/No	<p>Depending on the age of the system being replaced, this can be found on the rating tag and energy guide on the unit itself, in the owner's manual, or potentially on the brand's website in the product description or on online specifications sheets connected to the product page.</p> <p>Where equipment efficiency values are not readily available, the Department of Energy's Better Building Equipment Efficiency Default Values will be used. Alternatively, if a specific product has not been identified yet but general details are available, a proxy value may be identified by averaging the efficiency of an applicable system type from a database of available products.</p>
Efficiency of Old Water Heater System	BTU/watt-hr	
Specific Model of Old Water System	Type	
Efficiency Unit for Water Heater System being Replaced	Type	<p>The fuel unit (i.e., electric, gas, oil) will be determined by referencing the owner's manual or examining the unit itself (e.g., the presence of a pilot light indicates gas).</p> <p>If a specific product has not been identified or data is not readily available, a proxy value may be identified by averaging the efficiency of an applicable system type from a database of available products.</p>

Data Element	Unit(s)	How data will be collected / calculated
Annual Fuel Consumption	Gallons OR Cubic feet	<p>This may be calculated based on information provided in monthly energy bills or account summary provided by the local utility or fuel supplier.</p> <p>If primary data from energy bills is not readily available, users will leverage project-specific estimates, such as HERS reports, or industry-standard sources, such as the Energy Information Administration's Residential Building Energy Consumption Survey (RECS), Commercial Building Energy Consumption Survey (CBECS), or the National Renewable Energy Laboratory's ResStock and ComStock models to estimate average annual energy consumption.</p> <p>Further, users may leverage models that rely on these data sources to obtain more granular, tailored estimates of average annual energy consumption.</p>
Fuel used in old water heater	Type	<p>For non-electric units, fuel type (i.e., gas, propane, oil) will be determined by referencing the owner's manual or examining the unit itself.</p> <p>Otherwise, the user should assume the fuel used in the old water heater is natural gas.</p>
Efficiency of New Water Heater System	BTU/watt-hr	<p>If the new equipment has already been identified, the energy efficiency rating may be found on the brand's website in the product description or on online specifications sheets connected to the product page. Individual products can also be looked up by model numbers using the DOE eeCompass Consumer Products tool or the ENERGY STAR Product Finder.</p> <p>If a specific product has not been identified yet or if data is not readily available, a proxy value may be identified by averaging the efficiency of an applicable system type (e.g., heat pump electric water heater) from a database of available products.</p>
Efficiency improvement of new water use fixtures?	Percentage (%)	Users may leverage industry-standard research to inform the expected efficiency improvement.
Geothermal		
Energy Efficiency Ratio (EER) of geothermal system	BTU/watt-hr	If the new equipment has already been identified, the energy efficiency rating may be found on the brand's website in the product description or on online

Data Element	Unit(s)	How data will be collected / calculated
		specifications sheets connected to the product page. Individual products can also be looked up by model numbers using the DOE eeCompass Consumer Products tool or the ENERGY STAR Product Finder . If a specific product has not been identified yet or data is unknown, a proxy product may be identified in either tool.
<i>See HVAC section for description of shared data elements.</i>		
Smart Fridge		
Project ZIP Code	ZIP Code	The ZIP code will be pulled from the contractor's scope of work, project design documentation, loan documentation, bills of sale, or other documentation that indicates a project's ZIP code. Otherwise, the ZIP code will be determined by entering the address of the project site in the United States Postal Service's tool .
Number of Fridge Units Installed	Quantity	Information will be sourced from the project plan or description supporting the financial transaction. Otherwise, the total number of new fridge units may be back-calculated from the total project cost, using well-founded estimates of equipment and labor costs.
Grid-Controlled Appliances		
Project ZIP Code	ZIP Code	The ZIP code will be pulled from the contractor's scope of work, project design documentation, loan documentation, bills of sale, or other documentation that indicates a project's ZIP code. Otherwise, the ZIP code will be determined by entering the address of the project site in the United States Postal Service's tool .
Expected Percentage Energy Efficiency Improvement	Percentage (%)	Leverage industry-standard research or product descriptions/marketing material to inform the expected efficiency improvement.
Average Historical Annual Energy Consumption	Kilowatt Hour (kWh)	Users may use historical annual energy consumption from energy bills. If primary data from energy bills is not readily available, users will leverage industry-standard sources, such as the

Data Element	Unit(s)	How data will be collected / calculated
		<p>Energy Information Administration's Residential Building Energy Consumption Survey (RECS), Commercial Building Energy Consumption Survey (CBECS), or the National Renewable Energy Laboratory's ResStock and ComStock models to estimate average annual energy consumption.</p> <p>Further, users may leverage models that rely on these data sources to obtain more granular, tailored estimates of average annual energy consumption.</p>
Retrofit		
Building Area	Square Feet (ft ²)	<p>Preferably sourced from documents such as property tax records, building permits, architectural plans (builder's plans), appraisal reports, real estate listings, etc. Information may also be available on ENERGY STAR if the building is already using Portfolio Manager.</p> <p>If this information is not readily available, residential building area will be estimated based on data from the U.S. Energy Information Administration's (EIA) <u>2020 Residential Energy Consumption Survey data</u>; specifically, total average square footage per housing unit, by housing unit type.</p> <p>Commercial building area will be estimated based on EIA's <u>2018 Commercial Energy Consumption survey</u>; specifically, "Mean square feet per building" will be used, and the project will be matched to the closest "Principal building activity."</p> <p>Industrial building area will be estimated based on EIA's <u>2018 Manufacturing Energy Consumption Survey Data</u>, which provides average enclosed floorspace for a variety of establishments broken out by subsector and industry.</p>
Will the building R value be higher than 10 after retrofit?	Yes/No	<p>The Calculator assumes that retrofitted properties have either high insulation R value OR ENERGY STAR scores 85 and above or both. This information may be provided by the recipient of the financial assistance or based on the project plan, contractor scope of work, industry standard certifications, or description supporting the financial transaction.</p> <p>If data is unknown, users may assume the referenced targets.</p>
Does the building have an ENERGY STAR Target Score of 85 or higher?	Yes/No	

Data Element	Unit(s)	How data will be collected / calculated
Project ZIP Code	ZIP Code	<p>The ZIP code will be pulled from the contractor's scope of work, project design documentation, loan documentation, bills of sale, or other documentation that indicates a project's ZIP code.</p> <p>Otherwise, ZIP code will be determined by entering the address of the project site in the United States Postal Service's Look Up A ZIP Code tool.</p>
Project State	State	Information will be sourced from the project plan, the contractor's scope of work, project design documentation, loan documentation, bills of sale, or description supporting the financial transaction.
Building Reuse		
Building area	Square Feet (ft2)	<p>Primary data may be obtained from property tax records, building permits, architectural plans (builder's plans), appraisal reports, real estate listings, etc. The information reported will only include the area undergoing retrofit (i.e., may not be the entire building).</p> <p>If this information is not readily available, residential building area will be estimated based on data from the U.S. Energy Information Administration's (EIA) 2020 Residential Energy Consumption Survey data; specifically, total average square footage per housing unit, by housing unit type.</p> <p>Commercial building area will be estimated based on EIA's 2018 Commercial Energy Consumption survey; specifically, "Mean square feet per building" will be used, and the project will be matched to the closest "Principal building activity."</p> <p>Industrial building area will be estimated based on EIA's 2018 Manufacturing Energy Consumption Survey Data, which provides average enclosed floorspace for a variety of establishments broken out by subsector and industry.</p>
Old building type	Type	<p>This Calculator estimates the emissions reductions from reuse of an old building with no ENERGY STAR score for different building types. The emissions improvements are calculated using the average emission intensities for different building types and ENERGY STAR scores against new building types that don't have ENERGY STAR scores.</p>
Old building subtype	Type	
New building type	Type	
New building subtype	Type	

Data Element	Unit(s)	How data will be collected / calculated
		<p>The data is sourced from the U.S. Department of Energy's <u>Buildings Performance Database</u>.</p> <p>Information is selected from a pre-defined set of options in the Priority Project 2 Calculator. These selections are based on the project plan or description supporting the financial transaction.</p> <p>Commercial or residential will be selected. Multipurpose buildings that include both residential and retail units will be characterized as commercial and clarified in the subtype section.</p>
Net-Zero Housing		
Building Area	Square Feet (ft2)	<p>Primary data may be obtained from documents such as property tax records, building permits, architectural plans (builder's plans), appraisal reports, real estate listings, etc.</p> <p>If this information is not readily available, residential building area will be estimated based on data from the U.S. Energy Information Administration's <u>2020 Residential Energy Consumption Survey data</u>; specifically, total average square footage per housing unit, by housing unit type.</p>
Project State	State	Information will be sourced from the project plan, the contractor's scope of work, project design documentation, loan documentation, bills of sale, or description supporting the financial transaction.
Priority Project 3 – ZERO-EMISSIONS VEHICLES (ZEV)		
Onroad Vehicle		
Type of existing onroad vehicle being replaced	Type	Information is selected from a pre-defined set of options in the Priority Project 3 Calculator. These selections are based on assumptions using the project plan, type of project beneficiary, or description supporting the financial transaction. The pre-defined set of options comes from the <u>AFLEET Tool (2023)</u> , developed by Argonne National Laboratory.
Existing onroad vehicle purpose	Type	Information is selected from a pre-defined set of options in the Priority Project 3 Calculator and is selected using assumptions based on the project plan, type of project

Data Element	Unit(s)	How data will be collected / calculated
		beneficiary, or description supporting the financial transaction. The Type is based on EPA's Motor Vehicle Emissions Simulator (MOVES) .
Model year of existing onroad vehicle	Year	<p>For vehicles built after 1981, the model year can also be determined using the vehicle's VIN (Vehicle Identification Number). The VIN is a 17-character number that encodes specific information about the particular vehicle may be available on a label affixed to the vehicle's windshield or inside the door jam. The tenth character is a letter that represents the model year. The National Highway Traffic Safety Administration provides a VIN Decoder tool, which takes VIN as an input and includes vehicle model year as one of its outputs.</p> <p>If this information is not readily available, users may estimate the model year based on known information about the lifespan of the piece of equipment or national averages.</p>
Number of existing onroad vehicles being replaced	Whole number	<p>Information will be sourced from the project plan or description supporting the financial transaction.</p> <p>If information is not readily available, the recipient may estimate based on known information about the scope of the project, project costs, type of project beneficiary, and industry standards.</p>
Combined fuel efficiency on existing onroad vehicle being replaced	Miles / gallon	<p>Information will be provided from the recipient of the financial assistance. The recipient will use www.fueleconomy.gov, the official government source for fuel economy provided by the Department of Energy and the EPA. The value will be determined by the existing vehicle's make and model.</p> <p>If precise information is not readily available, the AFLEET Tool can be used to estimate mileage based on vehicle type, project state, and powertrain type. Vehicle type and powertrain type may be determined based on information about the scope of the project, type of project beneficiary, and industry standards.</p>
Annual miles driven per existing onroad vehicle being replaced	Miles	Information may be provided by the financial assistance recipient if it is known; for example, fleet replacement projects may have annual fuel spend data that can be converted to gallons of fuel purchased and annual miles

Data Element	Unit(s)	How data will be collected / calculated
		<p>driven using fuel cost data from the U.S. Energy Information Administration (EIA) and fuel efficiency data explained above. Information may be available through routing software or tracking systems in the vehicles.</p> <p>If precise information is not readily available, estimates from the AFLEET Online tool can be used to estimate mileage based on vehicle type, project state, and powertrain type. Vehicle type and powertrain type may be determined based on information about the scope of the project, type of project beneficiary, and industry standards.</p>
Will the existing onroad vehicles be destroyed or permanently removed from operation (by any owner) OR will the vehicles be resold for continued operational use?	Type	<p>Information may be provided by the recipient of the financial assistance or by a project plan or description supporting the financial transaction.</p> <p>If data is not readily available, we will assume the vehicle will be resold for continued operational use.</p>
New onroad vehicle type	Type	Information is selected from a pre-defined set of options in the Priority Project 3 Calculator. These selections are based on the project plan, type of project beneficiary, or description supporting the financial transaction. The pre-defined set of options comes from the AFLEET Tool .
Newly purchased onroad vehicle model year	Type	<p>Model year may be provided in the project plan or description supporting the financial transaction. Model year may also be determined using the National Highway Traffic Safety Administration provides a VIN Decoder tool, which takes VIN as an input and includes vehicle model year as one of its outputs.</p> <p>If data is not readily available, the latest model year available should be assumed for new vehicles. For used vehicles, users may estimate the model year based on known information about the lifespan of the piece of equipment or national averages.</p>
Project ZIP code	ZIP code	The ZIP code will be pulled from the contractor's scope of work, project design documentation, loan documentation, bills of sale, or other documentation that indicates a project's ZIP code. ZIP codes for vehicle projects will be determined by the borrower's address.

Data Element	Unit(s)	How data will be collected / calculated
		Otherwise, the ZIP code will be determined by entering the address of the project site in the United States Postal Service's tool .
Project State	State	Information will be sourced from the project plan, loan documentation, bills of sale, or description supporting the financial transaction.
Nonroad Vehicle Equipment		
Type of existing nonroad vehicle/equipment being replaced	Type	Information is selected from a pre-defined set of options in the Priority Project 3 Calculator. These selections are based on assumptions using the project plan or description supporting the financial transaction. The pre-defined set of options comes from the AFLEET Tool (2023).
Type of fuel for existing nonroad vehicle / equipment being replaced?	Type	Information will be provided from the recipient of the financial assistance and will be provided in a project plan or description supporting the financial transaction. If information is not readily available, the recipient may estimate based on known information about the scope of the project and industry standards.
Existing nonroad vehicle/equipment rated horsepower	Horsepower	Information can be found on the engine tag or engine label of the equipment. If the information is not on the engine tag or label, the recipient will find this information in the owner's manual, the sales/service literature, or based on the rated power for the specific engine family provided in EPA's Compliance and Fuel Economy Data sets . The recipient may also contact the engine manufacturer or authorized representative. If precise information is not readily available, estimates the AFLEET Tool can be used to estimate horsepower based on equipment type, project state, and powertrain type.
Existing nonroad vehicle / equipment model year	Year	Information can be derived from the engine family name. EPA has collected this information for a variety of engines dating back to 1982 in EPA's Compliance and Fuel Economy Data sets . If the model year of the engine is unknown because it is missing a serial number, manufacturer's build code, and/or an engine family

Data Element	Unit(s)	How data will be collected / calculated
		<p>number, the recipient may check with the engine manufacturer or their authorized representative (such as a dealer). The manufacturer or dealer may be able to provide a bracket for the model year based on the engine's build and components.</p> <p>If precise information is not readily available, the recipient may estimate the model year based on known information about the lifespan of the piece of equipment.</p>
Number of nonroad vehicles/equipment being replaced?	Number	<p>Information will be provided from the recipient of the financial assistance and will be provided in a project plan or description supporting the financial transaction.</p> <p>If information is not readily available, the recipient may estimate based on known information about the scope of the project and industry standards.</p>
Will the existing nonroad vehicles be destroyed or permanently removed from operation (by any owner); OR will the vehicles be resold for continued operational use?	Yes/No	<p>Information may be provided from the recipient of the financial assistance and may be provided in a project plan or description supporting the financial transaction.</p> <p>If data is not readily available, we will assume the vehicle will be resold for continued operational use.</p>
New nonroad vehicle/equipment type	Type	<p>Information is selected from a pre-defined set of options in the Priority Project 3 Calculator. These selections are based on the project plan or description supporting the financial transaction. The pre-defined set of options comes from the <u>AFLEET Tool (2023)</u>.</p> <p>If information is not readily available, the recipient may estimate based on known information about the scope of the project and industry standards.</p>
New nonroad vehicle/equipment rated horsepower	Whole number horsepower	<p>If new equipment has been identified, information may be found in the sales literature or on the manufacturer's website. The recipient may also contact equipment manufacturers or authorized representatives or consult manufacturer websites.</p> <p>If information is not readily available, the recipient may estimate based on known information about the scope of the project and industry standards.</p>

Data Element	Unit(s)	How data will be collected / calculated
New nonroad vehicle/equipment model year	Year	Unless the recipient intends to purchase used equipment, the latest model year available should be assumed.
IF BEV: primary location for the charging	ZIP code	Information will be provided from the recipient of the financial assistance and will be provided in a project plan or description supporting the financial transaction.
Fuel Switch		
Baseline fuel type	Type	Information is selected from a pre-defined set of options in the Priority Project 3 Calculator. These selections are based on the project plan or description supporting the financial transaction. The pre-defined set of options comes from the AFLEET Tool (2023) . If information is not readily available, the recipient may estimate based on known information about the scope of the project and industry standards.
Annual baseline fuel consumption	Gallons / year	Ideally, precise information would be provided by the recipient using existing fleet management software, using an average of the last three years of data depending on availability (excluding anomalous years). If precise information is not readily available, estimates the AFLEET Online tool can be used to form an estimate based on vehicle type, state, and powertrain (miles per year * fuel economy * number of vehicles).
New alternative fuel type	Type	Information is selected from a pre-defined set of options in the Priority Project 3 Calculator. These selections are based on the project plan or description supporting the financial transaction. The pre-defined set of options comes from the AFLEET Tool (2023) , developed by Argonne National Laboratory. If information is not readily available, the recipient may estimate based on known information about the scope of the project and industry standards.
Annual new alternative fuel consumption	Gallons/year	Information will be provided from the recipient of the financial assistance. The new alternative fuel consumption will be estimated based on the baseline fuel consumption considering any changes in consumption expected by the project.

Data Element	Unit(s)	How data will be collected / calculated
		If information is not readily available, the recipient may estimate based on known information about the scope of the project and industry standards.
Charging & Walkability/Bikability Infrastructure		
Project State	State	The state will be pulled from the contractor's scope of work, project design documentation, loan documentation, bills of sale, or other documentation that indicates a project's location.
Project ZIP Code	ZIP Code	The ZIP code will be pulled from the contractor's scope of work, project design documentation, loan documentation, bills of sale, or other documentation indicating a project's ZIP code. Otherwise, the ZIP code will be determined by entering the address of the project site in the United States Postal Service's Look Up a ZIP Code tool.

Table 2: ENGERY STAR Portfolio Manager & Audit Template Project Task Description⁶

Data to be collected	Unit(s)	How data will be collected / calculated
Priority Project 2 – NET-ZERO BUILDINGS (If applicable – AND ROOFTOP SOLAR)		
<Project Type Header>		
<Data Element>	<Unit>	<Description of how it will be collected>

⁶ This table will be populated upon receiving EPA guidance as discussed in Section A5.