



OPERATIONAL GREENHOUSE GAS ANALYSIS

Self-Help Credit Union, Self-Help Federal Credit Union,
and Self-Help Ventures Fund

CALENDAR YEAR 2021

Introduction

At Self-Help, we've demonstrated significant environmental commitment across our many lines of service:

- We do not finance fossil fuel extraction, infrastructure, or delivery.
- We lend to companies that have a positive environmental impact. In addition to our social mission criteria, we seek motivated borrowers and provide technical assistance to advance energy efficiency and clean energy. For example, the loans we have made to solar developers (an investment of over \$176M) led to the production of more than 344,347 megawatt hours (MWh) of clean energy in 2021.
- We engage in environmental policy where we can provide unique expertise and insights, such as in our February 2021 report, *The Climate Imperative and Community Finance*.¹
- Our residential real estate developments have been solidly, consistently green for over a decade. We certify to the third-party *SystemVision* standard,² which provides a comfort and energy guarantee for all new homes that we build directly. We were among the first developers in North Carolina to use the *SystemVision for Existing Homes Program Standard* for residential renovations.
- In commercial real estate development, Self-Help benchmarks energy use, prioritizes energy efficiency investments, and applies green guidelines for major renovations and new construction.

Building on these principles, we analyzed 2021 greenhouse gas emissions (GHGs) associated with activities in which Self-Help is the main actor: staff coming to work, turning on the lights, providing member services, traveling between locations, etc. Two categories of GHG emissions are broken out for analysis:

- Consumer Credit Union (Credit Union) operations at retail branches, grouped together with central support teams composed of back-office functions. Included here are GHGs associated with office space, staff business air travel, company vehicles shared by all teams, and staff commuting.
- Commercial Real Estate (CRE) buildings associated with commercial buildings owned and operated by Self-Help, in which our tenants use lights, heating, cooling, and other electric loads.

In the lingo of GHG accounting, these emissions are spread out across three “scopes,” which we will discuss in the next section.

Assessing our GHG footprint is our first step toward setting carbon goals and tracking progress toward them. In parallel, we will continue progress on environmental sustainability efforts, which align environmental impact with social justice impact. We share green impact statistics on our websites at www.self-help.org/green and <http://www.self-helpfcu.org/greenfootprint>.

¹ [Malkin-Weber, M., Beck D., Schneiderman, B., and Philip E. Otienoburu. “The Climate Imperative and Community Finance: Regulatory and Policy Tools to Drive a Just Response.” Self-Help Credit Union, February 2021.](#)

² [SystemVision standard by Advanced Energy.](#)

Carbon accounting background

GHGs are classified into “scopes” based on the level of control organizations have over the activity responsible for their emissions (Figure 1). These scopes follow the *Greenhouse Gas Protocol*, which serves as an internationally recognized basis for greenhouse gas accounting. The *Protocol*, which is developed in part by the World Resources Institute, expresses emissions in units of carbon dioxide equivalents, or CO₂e.³ Our analysis follows WRI’s suggested GHG accounting methodology.⁴

Figure 1: GHG Scopes 1-3 as they pertain to Self-Help Credit Union in CY 2021 (circle sizes not to scale)



³ Though human-caused emissions consist of many different types of greenhouse gases (methane and nitrous oxide among them) that have varying effects on the environment, these effects are smoothed into CO₂e, a common unit that allows for easy reference and comparison.

⁴ [“The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard.” World Resources Institute and World Business Council for Sustainable Development, 2004.](#)

In standard GHG accounting, **Scope 1** refers to direct emissions from an organization's buildings and vehicles. The organization has direct control over these: for example, gasoline used to fuel company vehicles.

Scope 2 emissions are indirect emissions from energy used by an organization but generated outside of its buildings, such as electricity purchased from utility providers.

Scope 3 emissions occur indirectly as a result of an organization's operations, but are not controlled or owned by the organization. It is common for organizations to include emissions related to employee commuting and business travel in Scope 3.

In GHG accounting lingo, the phrase "operational footprint" is used to describe the sum of Scopes 1–3 GHG emissions for an organization.

Analysis boundaries

Our organization-wide analysis addresses GHGs across two broad categories of Self-Help operations:

- **Credit Union.** This category includes Self-Help's activities as a lender and provider of consumer credit union services. It also includes staff and buildings dedicated to back-office functions, such as human resources, information technology, and accounting. Self-Help's consumer credit union branches operate under two separate charters: Self-Help Credit Union (SHCU) and Self-Help Federal Credit Union (SHFCU).
- **Commercial Real Estate (CRE).** Self-Help's commercial real estate (CRE) team is charged with developing catalytic projects in partnership with mission-aligned partners. To achieve that goal, we maintained a portfolio of 25 commercial buildings in CY 2021 that were leased to commercial and non-profit tenants.

Our Credit Union analysis examined Self-Help locations in North Carolina, South Carolina, Virginia, Florida, Illinois, California, and Wisconsin. We excluded from our analysis five branches in Washington state that we onboarded through a merger in CY 2021. We will include these Credit Union locations in future analyses and are in the process of enhancing our data collection to make this possible. We also excluded branches for which both of these conditions are true: (1) we lease office space from a property manager or building owner (2) the property manager or building owner pays for all utilities related to Self-Help operations in the space. This methodology is consistent with our approach to accounting for CRE emissions.

We analyze CRE separately because the energy-intensity of large commercial and mixed-use buildings is quite different from that of small consumer credit union branches.

We analyze emissions for all CRE properties for which Self-Help (rather than the tenant) is responsible for paying utility bills. We excluded multi-family buildings for which third-party managers handle common-area utilities, and also properties in which commercial tenants pay for their own utilities.

Industry norms for reporting GHGs in the CRE sector are still evolving, particularly with regard to how owners handle GHGs associated with tenant electric use.⁵

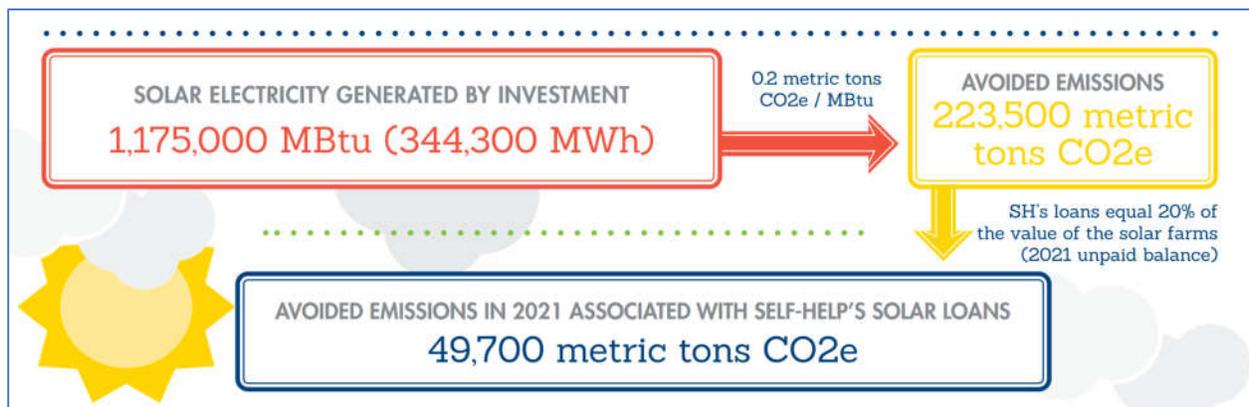
Available data for CRE GHGs are Scope 1 and Scope 2 only. Emissions are associated with natural gas burned on site in boilers or furnaces for heating and with electricity purchased from electric utilities. Data for indirect emissions associated with CRE properties is not reasonably accessible to us.

In the future, we will benchmark our footprint against national averages in the financial services and CRE sectors once such data becomes available. When comparing our emissions with those of peer organizations, we will consider the building characteristics of Self-Help’s CRE portfolio, which contains a high percentage of historic preservation projects and vintage buildings that have been revived to meet community needs.

In the 2021 analyses, our GHGs were heavily affected by the COVID-19 pandemic. We anticipate that GHG emissions associated with employee commuting, business travel, and other operations will increase in the future as we return closer to pre-pandemic levels.

In our CY 2020 analysis, we analyzed the GHG footprint of 628 commercial loans (a “portfolio analysis”). We were among the first Community Development Finance Institutions (CDFIs) to conduct portfolio analyses using the newly released methodology from Partnership for Carbon Accounting Financials. With peer CDFIs, we developed a process guide to support other CDFIs to navigate the complex process.⁶ We did not replicate the analysis for CY 2021, but expect to repeat the portfolio analysis in some future years. We expect this analysis to be more helpful as carbon accounting evolves so that we can access more granular data about the sectors we lend in. However, we did tally a CO₂e estimate of “avoided emissions” as a result of our CY 2021 solar loan portfolio, which is discussed in [Results](#).

Figure 2: Example conversion of utility-scale solar investment into avoided emissions⁷



⁵ Huysmans, Kyna. “Whose Carbon Is It?” GRESB, May 2017.

⁶ “Process Documentation: Portfolio GHG Accounting for CDFIs.” Coastal Enterprises, Self-Help Credit Union, and Partner Community Capital, December 2021.

⁷ As per standards set by the [Partnership for Carbon Accounting Financials](#), we report the amount of avoided emissions pro-rated to the percent of Self-Help’s contribution to each loan. Self-Help ownership of each loan is pro-rated based on remaining investment at year-end (December 2021). This yields a conservative emissions value.

Methodology

We gathered Self-Help internal operational data (including business travel data, commuting data, and employee geographic data) from Self-Help back-office departments. We gathered the bulk of utility usage data from WeGoWise, an enterprise utility tracking software that we sync with most Self-Help locations. Some utility usage data was gathered manually.

We conducted all GHG emission calculations using the US Environmental Protection Agency's Simplified GHG Emissions Calculator (SGEC) tool.⁸ The SGEC tool allows organizations to enter data regarding business activities (employee travel, utility usage, etc.) and calculates the GHG mix associated with these activities. The calculations convert activities to emissions using localized averages, such as the grid mix of power in the regions where activities took place, industry averages for vehicular efficiency, air travel GHGs for long- and short-hop flights, etc.

We found some gaps in data that were not readily filled. We made assumptions in those cases, including:

- Missing utility data: We lacked complete electric and/or gas utility data at 16 locations. We estimated utility usage at these locations by calculating the electric and/or gas usage per square foot at the nearest Self-Help locations, and then multiplying that factor by the actual square footage of the location.
- Overlap between categories of CRE and Credit Union: We analyzed CRE and Credit Union GHGs separately. There is, however, a small overlap in CRE and Credit Union functions, because back-office teams support both functions. We therefore attributed all back-office functions (and their emission-generating business activities) to the Credit Union GHG total.
- Employee commuting: We assumed all employee commuting to/from Self-Help offices takes place in passenger cars. Employee home addresses and office addresses, both used for employee commuting analysis, were estimates based on the nearest ZIP code. We designed the commuting calculation for each employee based on their function (retail employees worked in person all year, whereas support staff telecommuted for most of the year). In future iterations of this analysis, we hope to capture the emissions benefits of staff who carpool, or commute by bike, foot, or public transit.

⁸ [Environmental Protection Agency's Simplified GHG Emissions Calculator.](#)

Results

Overall totals

2021 Credit Union emissions, across both customer-facing and back-office operations, consisted of 4,408 metric tons of CO₂e. Activities in this category included utility purchases, natural gas burned for building heating, company car usage, business air travel, and employee commuting (in GHG lingo, this encompasses Scope 1, Scope 2, and Scope 3). Figure 3 shows the relative contribution of different activities into the operational GHG footprint for Credit Union. Commuting, and some business travel, comprised the bulk of Credit Union operational emissions.

2021 GHG emissions associated with CRE operations total 3,388 metric tons of CO₂e. Activities included in this category include utility purchases (in GHG lingo, this encompasses Scope 1 and Scope 2). Figure 4 demonstrates the breakdown of CRE emissions between Scope 1 and Scope 2. The majority of these emissions resulted from electricity purchases.

Figure 3: Emissions breakdown between Scopes 1-3 for Credit Union operations

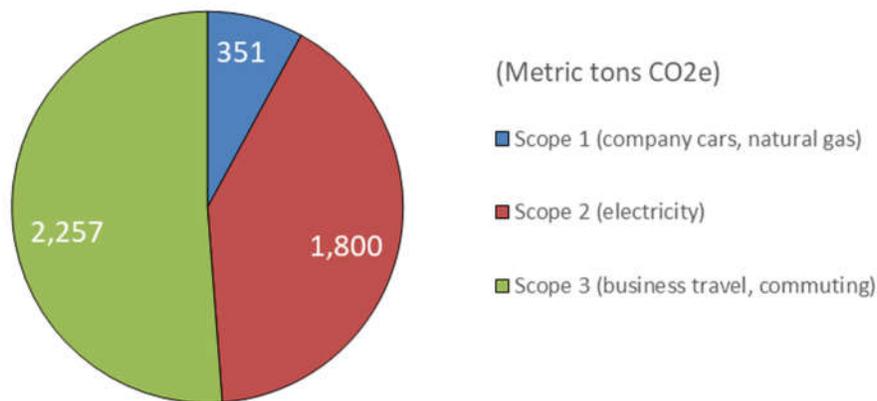
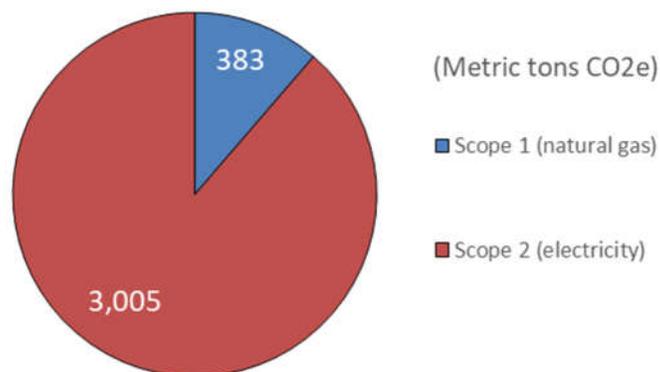


Figure 4: Emissions breakdown between Scopes 1 and Scope 2 for CRE operations



In 2021, Self-Help’s commercial loans to solar energy projects put 344,347 MWh of clean electricity on the grid, displacing electricity that would have been otherwise produced by electric utilities, which primarily use dirty fuel. The share of this clean energy attributable to Self-Help’s loans is equivalent to displacing fossil fuel electricity that would have produced 49,669 metric tons of CO2e.⁹ These metric tons are conceptually referred to as “avoided emissions.”

While tempting, we cannot deduct avoided emissions from our Scopes 1-3 emissions. Such an action would violate the World Resources Institute’s prescribed accounting practices, which prohibit double counting. Double counting would come about in this situation because renewable attributes of a clean energy installation are represented by renewable energy credits (RECs), which are registered with a formal REC registry as they are generated. These RECs are marketable instruments. Project owners have already contracted to sell these RECs to other buyers as part of their project capital stack. Nevertheless, we include avoided emissions in this summary because financing clean energy remains a substantial component of Self-Help’s positive impact as we help build the transition to a clean energy economy.

The overall totals of the above analyses are summarized in Table 1, showing GHG emissions and avoided emissions across the organization and portfolio.

Table 1: Summary of organization-wide emissions across Scopes 1-3

<i>(Metric tons CO2e)</i>	Credit Union	CRE	Avoided emissions
Scope 1	351	383	0
Scope 2	1,800	3,005	0
Scope 3	2,257	0	-49,669
Total	4,408	3,388	-49,669

Discussion

GHG analyses are often driven by a desire to provide transparency to stakeholders. Large investors in CDFIs, such as Bank of America and Wells Fargo, have set their own net zero targets, including targets for their investment portfolios. Actions towards targets will ripple outward to CDFIs as investees.

GHG analysis enables us to set up data collection systems that provide the information and insights we need to drive organizational sustainability improvements. Expanding the boundaries of our 2021 analysis to branches in Illinois, Wisconsin, and California (branches that were not present in past analyses) helped catalyze implementation of the utility tracking portal for buildings in those locations. Creating centralized access to utility data will serve as the foundation for organizing energy efficiency retrofit projects at these locations and then measuring the results.

Analyzing our GHG footprint and avoided emissions provides a view of our impact in the world through a critical carbon lens. It is a welcome addition to the other ways we measure impact, such as the number of jobs we help create, the amount of dollars we spend with minority and women owned businesses,

⁹ Refer to the calculation outlined in Figure 2.

and our investments in low-wealth communities. The Self-Help annual report contains a full set of inspiring impact statistics such as these.¹⁰

Eventually, we will be able to benchmark our GHG footprint against those of peer credit unions, real estate developers, and lenders. Currently, however, data disclosures are not yet available for such comparisons.

Meanwhile, we will continue pursuing opportunities to shrink the carbon footprint of our loans, operations, and real estate investments. This report provides us with robust baselines against which to measure progress. We also can continue to invest in avoided emissions and to collaborate with other lenders and partners to drive change more broadly.

Self-Help investors, members, and stakeholders have always held Self-Help responsible for creating a positive environmental impact. Many invest with Self-Help because we do not invest in projects involving fossil fuel extraction, and instead seek to invest in environmentally-positive opportunities. In the future, we know our supporters will desire to include GHG emissions in that expectation of accountability. We are committed to decreasing our own environmental footprint, while helping others do the same. We are also working hard to improve transparency—and hence accountability—for ourselves and other financial institutions.

About the authors

Melissa Malkin-Weber is the Sustainability Director of Self-Help Credit Union, based out of Durham, NC. **Sid Paladugu** is a Master’s student at Duke University’s Sanford School, interning with Self-Help.

The authors wish to thank Ashley Williams, Elisa Lazzarino, Ray Morrow, Patricia Walker, Vicki Norgren, Bonnie Ashley, Shelia Robinson, David White, Melissa Alford, Lily Steponaitis, Brad Rowland, Eve Suarez, Bryan Alexander, Claire Castleman, Nim Villegas and Elaine Holman for their contributions to this report.

¹⁰ [“2021 Annual Report.” Self-Help Credit Union, 2022.](#)