Greenhouse Gas Inventory Update

PREPARED FOR: BRYN MAWR COLLEGE

THE STONE HOUSE GROUP

BUILDING STEWARDSHIP

June 2023

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Greenhouse Gas Inventory Update FY 202

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The graphic below summarizes Scope 1, 2, and 3 sources of GHG emissions.
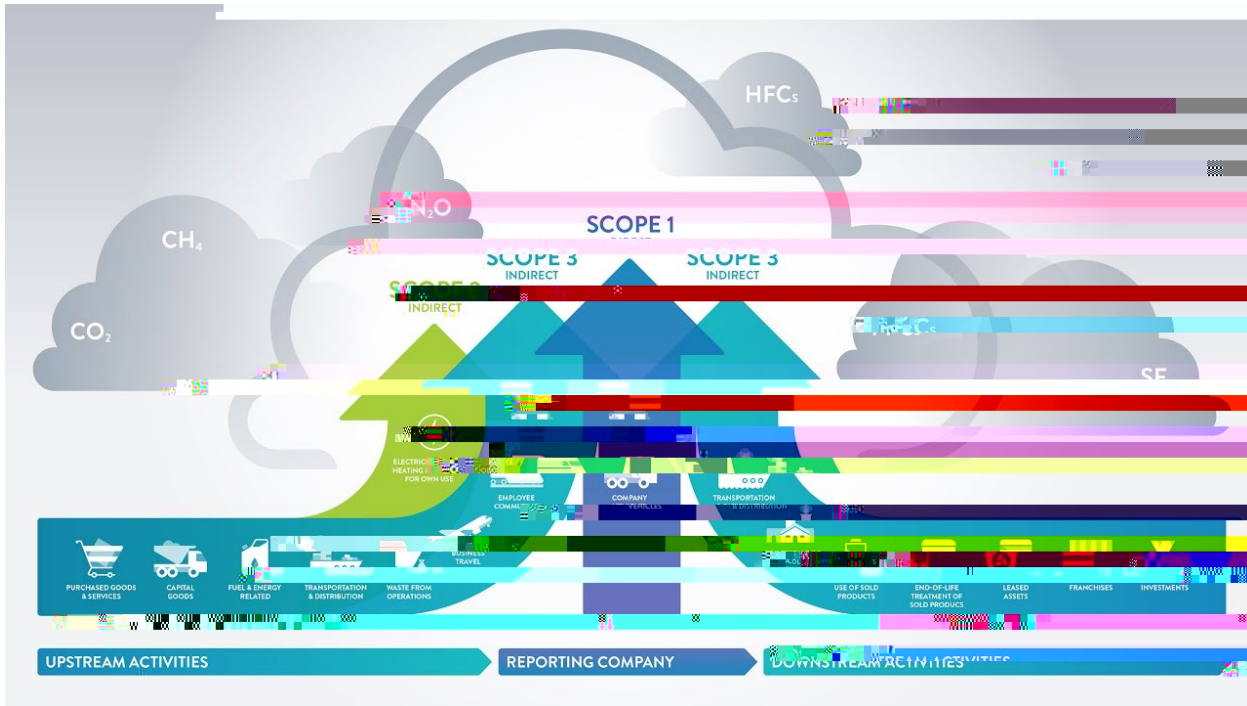
Source: WRI/WBCSD Corporate Value Chain (Scope 3) Accounting and Reporting Standard (PDF), page 5.

11. Use of sold products: Emissions from the use of products sold by the organization.
12. End-of-life treatment of sold products: Emissions from the disposal or recycling of products sold by the organization.
13. Downstream leased assets: Emissions from leased assets downstream in the value chain.
14. Franchises: Emissions from franchised operations. We do not believe that this category applies to Bryn Mawr College.
15. Investments: Emissions from investments in other organizations.

Tracking and reporting Scope 3 emissions can provide organizations with valuable insights into the full lifecycle emissions of their products and services and identify areas where they can reduce their environmental impact. Accounting for emissions that result from furniture and computer purchases can be relatively straight forward, and Bryn Mawr can adopt sustainable purchasing policies that help to reduce these emissions. Some emissions categories are more difficult to measure. For example, quantifying emissions that result from the end-of-life treatment of sold products would require a detailed understanding of how Bryn Mawr community members utilize items purchased at the campus bookstore. Creating awareness of the sources of Bryn Mawr College's emissions is an important step in managing and reducing the College's environmental impact. GHG accounting standards will continue to evolve over time, which standardize data collection processes and will allow the College to measure all 15 Scope 3 emissions categories.

Greenhouse Gas Offsets

Various on-site and off-site projects can be used to reduce an organization's gross greenhouse gas emissions, all of which fall under the category of "GHG Offsets." The College currently purchases Renewable Energy Credits (REC's) that offset emissions from all electric consumption, which were 15,915 MWh's of Green-e certified Wind REC's in FY 2022. A REC represents the environmental attributes, but not the electrons, of 1 MWh of renewable energy generation on the electricity grid. REC's are a tool used to track when and where renewable energy is generated, who it is sold to, and who is using it. When electricity is generated, the electrons are all mixed together on the grid, and there is no way to know the sources from which they were generated. REC's make it possible for consumers to choose clean energy and not have it be claimed by anyone else.

Bryn Mawr purchases REC's that are Green-e certified, meeting the environmental standards established by the non-profit Center for Resource Solutions. Bryn Mawr College generates on-campus non-additional offsets through preservation of trees in the College's Morris Woods. In 2018 & 2019, the College undertook a detailed assessment of trees on campus, determining that are 1,298 large trees on the main campus. An additional 1,702 trees are located on the Morris Woods area of campus, which the College has no plans for development. Since the trees located in Morris Woods are being preserved, they are being count as a 37 MTCDe carbon offset. This internal carbon offset project has not been verified by a third party, such as the American Carbon Registry or Verified Carbon Standard. Therefore, the offset is being categorized as a non-additional offset in each year.
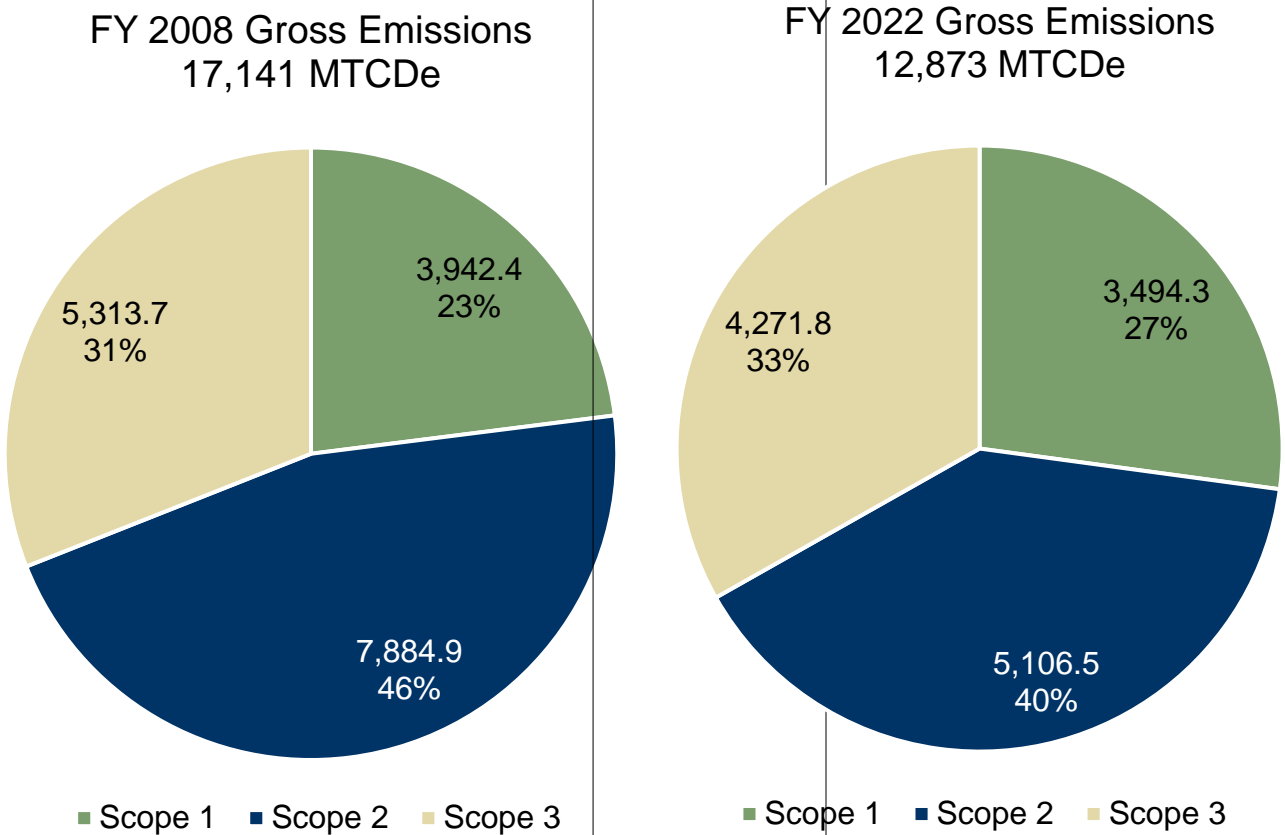
strengthen forest management and advocacy efforts by quantifying forest structure and the environmental benefits that trees provide.

In FY 2022, Project Murph mitigated 99.1 MTCDe of emissions while Kittanning Run mitigated 167.4 MTCDe. The charts below show the impacts of tree planting by species through the initial 5 years of the project. As the trees mature to their fifth year, the total amount of carbon mitigation will increase to 1,005 MTCDe. These trees are protected for the next 50 years.

Comparison to Previous GHG Emissions Inventories

Bryn Mawr College uses FY 2008 (June 1, 2007 – May 31, 2008) data as the College's Base Year for emissions. A GHG Inventory was most recently completed using FY 2014 operating data. Both the 2008 and 2014 inventories will be used as comparison points for the FY 2019 GHG Emissions presented in this report. In this report, gross emissions reflect all campus emissions and net emissions account for Renewable Energy Credits and Carbon Offsets that the College has retired.

FY 2008 Gross Emissions
17,141 MTCDe

- 5,313.7 — 31%
- 3,942.4 — 23%
- 7,884.9 — 46%

■ Scope 1 ■ Scope 2 ■ Scope 3

FY 2022 Gross Emissions
12,873 MTCDe

- 4,271.8 — 33%
- 3,494.3 — 27%
- 5,106.5 — 40%

■ Scope 1 ■ Scope 2 ■ Scope 3

Figures 1 & 2: Base Year (2008) net GHG emissions totaled 17,141 MTCDe (left). FY 2022 net GHG emissions totaled 12,873 MTCDe (right).
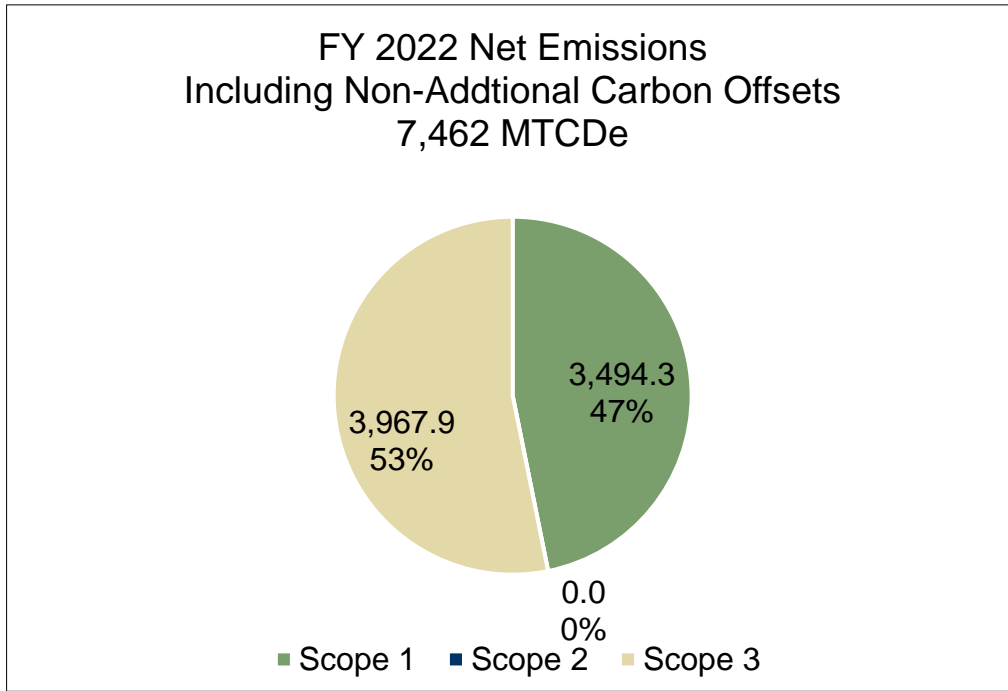
Figure 3: FY 2022 net GHG emissions, including non-additional offsets, totaled 7,462 MTCDe.
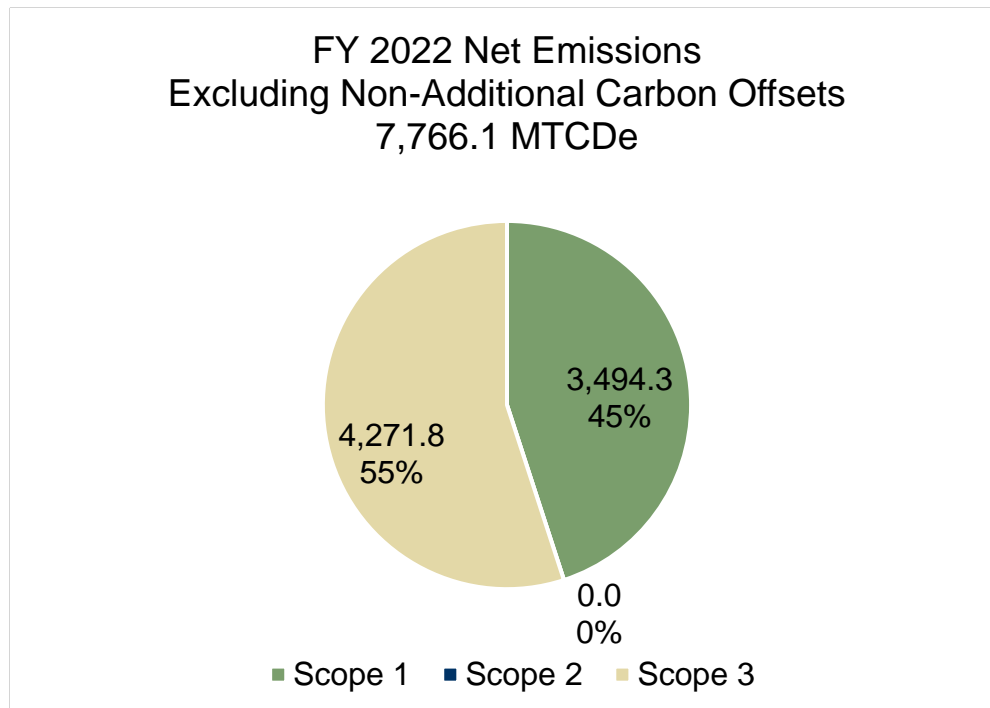

Figure 4: FY 2022 net GHG emissions, excluding non-additional offsets, totaled 7,766.1 MTCDe.
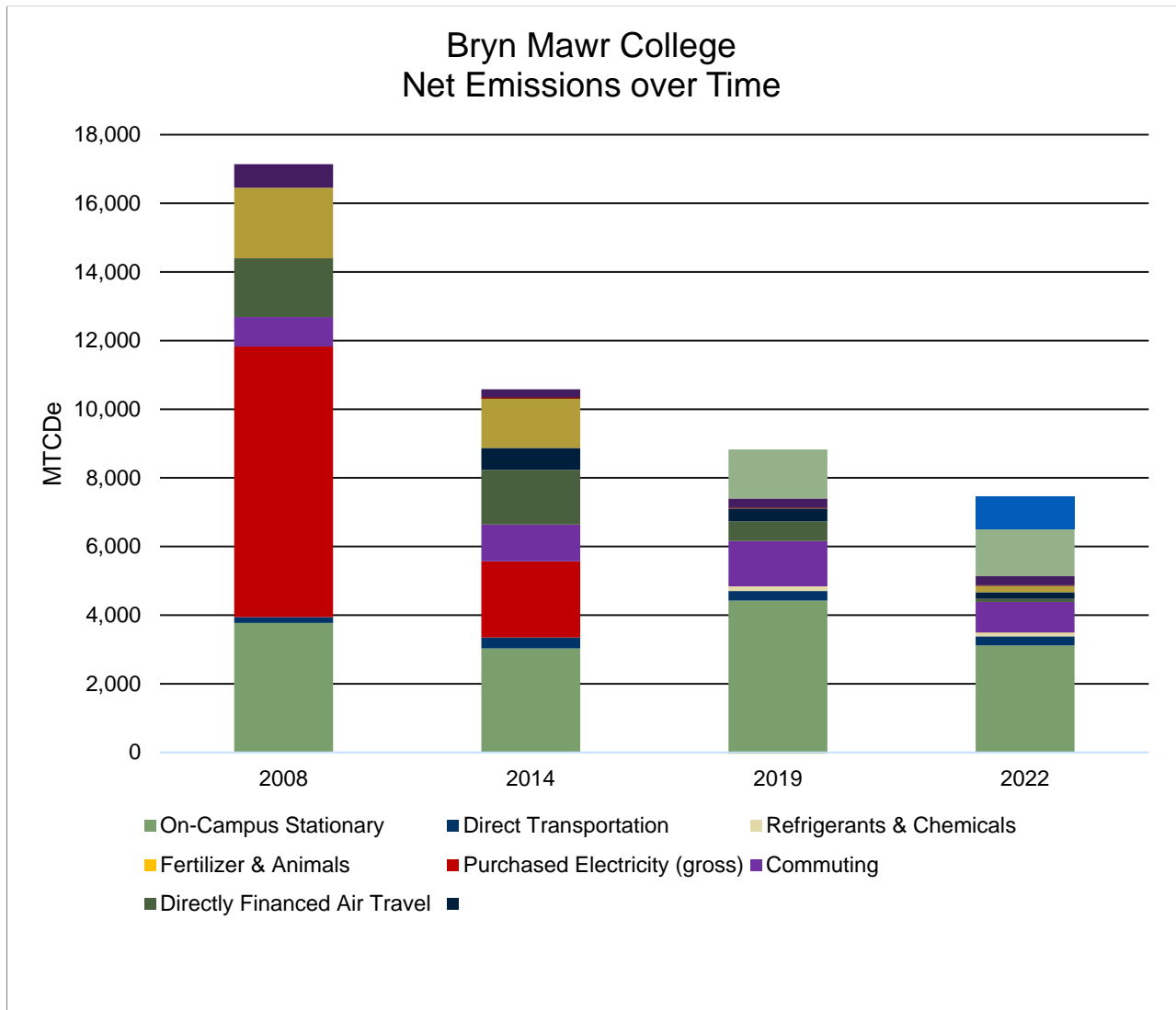
Figure 7: Comparison of net campus emissions, by category and fiscal year.

Bryn Mawr College
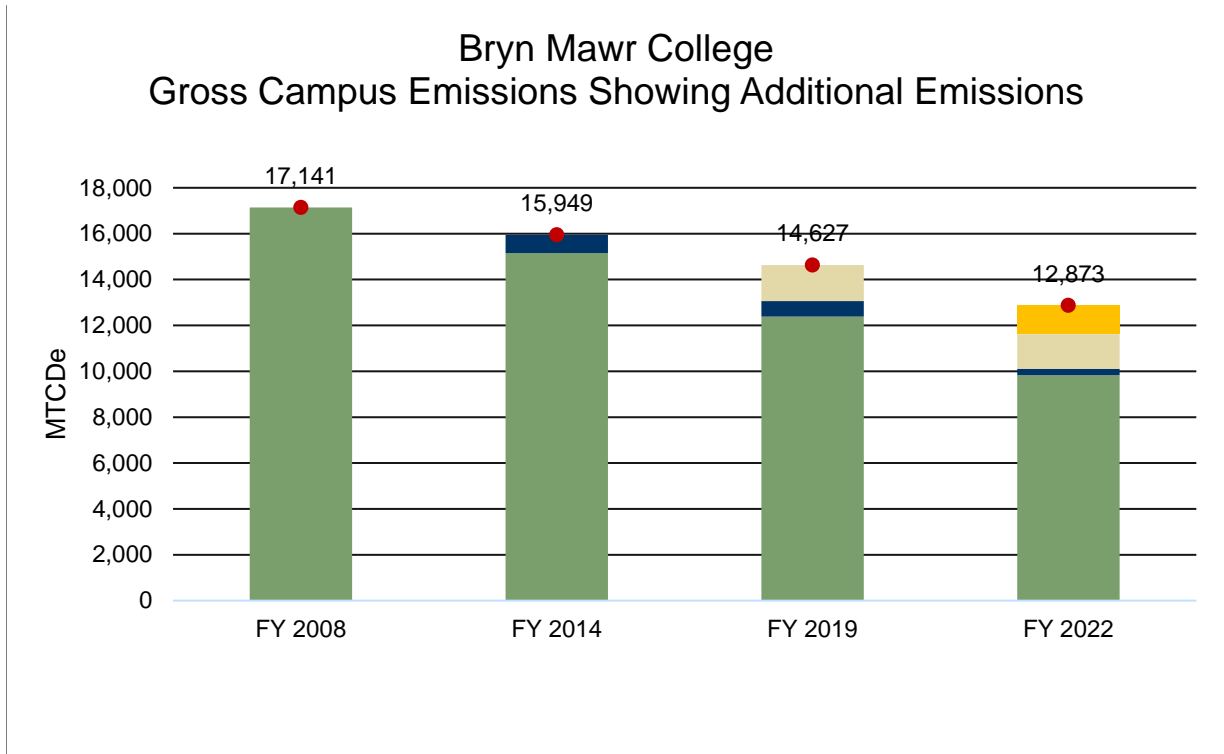## Gross Campus Emissions Showing Additional Emissions

Figure 9: Illustration of new gross emissions categories, by fiscal year.

Figure 10: Illustration of new net emissions categories, by fiscal year.

Figure 11: Detailed report of emissions by category for fiscal years 2008, 2014, 2019, and 2022.