UNIVERSITY OF RICHMOND

2021 Climate Action Plan Update

OFFICE FOR SUSTAINABILITY

Executive Summary

In 2007, University of Richmond (UR) signed onto the the American College and University Presidents' Climate Commitment, pledging to become carbon neutral by 2050. Three years later, UR published its first Climate Action Plan, a framework that committed the university to reduce its greenhouse gas (GHG) emissions 30% below 2009 levels by 2020 and 65% by 2035, on its way toward eliminating net carbon emissions. This Progress Report and GHG Inventory document UR's GHG current footprint as of 2021.

The University completed its first GHG audit in FY2009. The findings of that audit provide the baseline data that the University uses to measure emission reduction progress. As of 2021, the University has reduced its emissions 29,653 mtCO2e, 69% below 2009 levels. To meet carbon neutrality, current projections indicate that additional reductions totaling 13,362 mtCO2e are needed. The University is committed to reducing GHG emissions and energy use across campus. In addition to emissions reductions, the Climate Action Plan articulated goals for embedding sustainability into the curricular and cocurricular aspects of a Richmond education. Those aims are now incorporated into the University of Richmond Sustainability Plan, which launched in 2019.

University of Richmond's Climate Action Plan aims to provide the UR community and its partners with a transparent roadmap of specific strategies for how the University will meet its GHG emission reduction targets. The Climate Action Plan will continue to be updated as needed, to incorporate new and innovative ideas and technologies.

Emissions by Source

The table and figure below summarize current GHG emissions across various sectors of the University. Strategies to reduce GHG emissions are outlined in the University's Climate Action Plan.

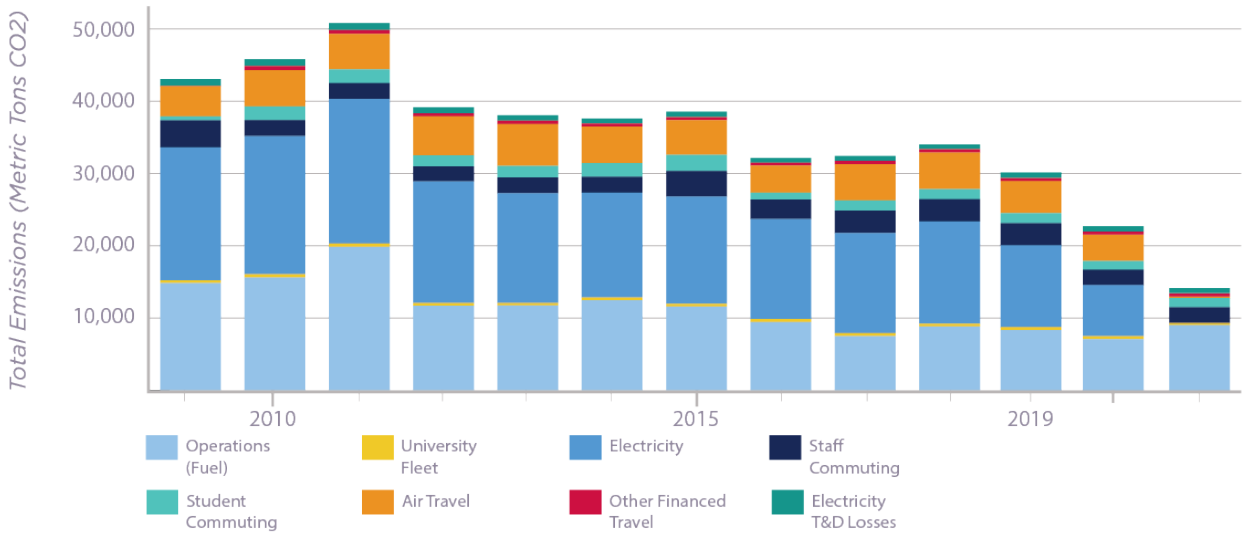

Figure 1: Stacked bar graph of GHG emissions by source from 2009-2021

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Operations (Fuel)	17,660	14,831	15,611	19,832	11,689	11,720	12,467	11,562	9,449	7,498	8,826	8,673	7,618	8,914
Transport	400	391	428	462	386	366	383	392	417	400	396	348	286	248
Electricity	20,295	18,415	19,157	20,004	16,854	15,186	14,493	14,848	13,861	13,861	14,137	11,133	5,994	0
Indirect (Commuting/ Travel)	10,020	9,377	10,586	10,499	10,180	10,739	10,230	11,703	8,392	10,631	10,644	10,468	8,399	4,218
Total	48,375	43,015	45,782	50,796	39,110	38,011	37,572	38,504	32,119	32,390	34,003	30,616	22,247	13,362

Figure 2: Table of GHG emissions by source from 2008-2021

Emissions by Scope

In 2021, Scope 1 emissions contributed to the most (69%) while Scope 3 emissions contributed to the second most (31%). UR's largest contributor to overall net emissions is Scope 2 emissions, which account for the impacts of indirect, purchased electricity and renewable energy. However, the 2018 Spider Solar project has dramatically shifted this trend in emissions by matching 100% of electricity usage (Scope 2) on campus with solar energy RECs. 2021 was the first full year in which the array was in operation and its full impact was observed in yearly emissions. As of 2021, no emissions were attributed to Scope 2 for the first time since the University began tracking carbon emissions in 2005. Emissions across Scopes 1 and 3 have also decreased since 2009, by 40% and 55% percent, respectively. The relatively large decrease in Scope 3 emissions observed in 2021 is unusual for the University and has likely been influenced by the COVID-19 Pandemic. In March 2020, the emergence of the COVID-19 pandemic resulted in the adoption of interim University policies designed to reduce the public health risk within the campus community. The climate accounting figures for FY21 bear the largest distortion from long-term commuting trends since the transition to remote work and learning methods shortened the number of weeks spent commuting altogether. Figures 3 and 4 below report UR's 2021 GHG emissions and energy consumption by scope from 2009-2021.

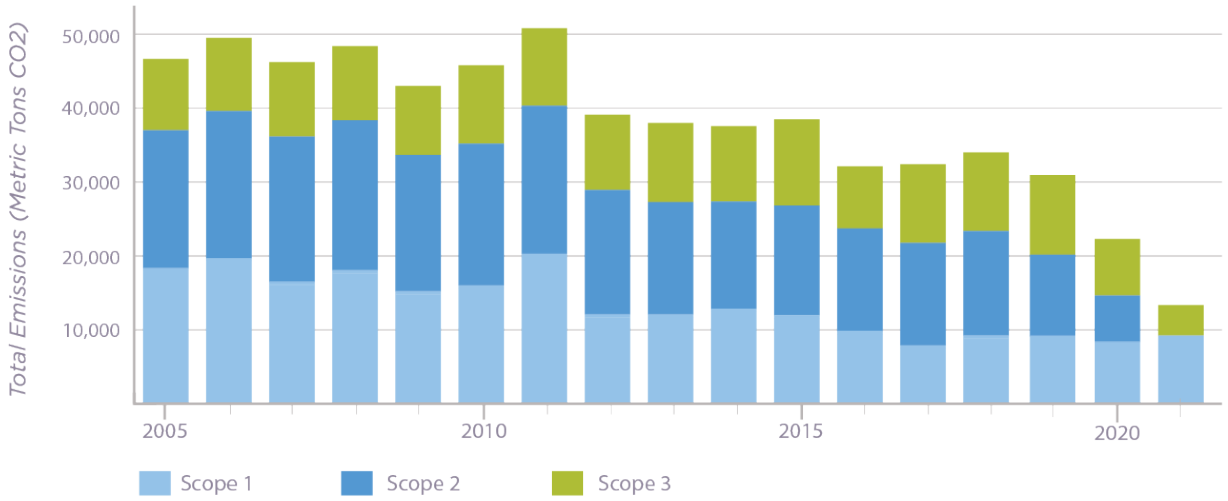

Figure 3: Stacked bar chart of GHG emissions by scope from 2005-2021

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Scope 1	18,345	19,684	16,475	18,059	15,222	16,039	20,293	12,075	12,086	12,850	11,953	9,866	7,899	9,222	9,022	7,904	9,162
Scope 2	18,668	19,897	19,660	20,295	18,415	19,157	20,004	16,854	15,186	14,493	14,848	13,861	13,861	14,137	11,133	5,944	0
Scope 3	9,652	9,919	10,072	10,020	9,377	10,586	10,499	10,180	10,739	10,230	11,703	8,392	10,631	10,644	10,468	8,399	4,218
Total	46,665	46,499	46,207	48,375	43,015	45,782	50,796	39,110	38,011	37,572	38,504	32,119	32,390	34,003	30,616	22,247	13,362

Figure 4: Table of GHG emissions by scope from 2005-2021

Impact of COVID-19

The FY20-FY22 Commuting Survey was released following an anomalous period for climate accounting at the University of Richmond. In March 2020, the emergence of the COVID-19 pandemic resulted in the adoption of interim University policies designed to reduce the public health risk within the campus community. The climate accounting figures for FY21 bear the largest distinction from long-term commuting trends since the transition to remote work and learning methods shortened the number of weeks spent commuting altogether. As such, there is a drop in University emissions that, although it reflects reality, is not the best data by which to predict future emission levels and stable progress towards climate goals.