SAINT LOUIS UNIVERSITY

GREENHOUSE GAS INVENTORY

FY2014

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A greenhouse gas (GHG) inventory is a comprehensive analysis of all emissions created from energy used by an institution. As a step toward sustainability at Saint Louis University, this greenhouse gas inventory is the first for the university. This inventory will serve as the baseline for all following GHG inventories and provide the University a tool to track all GHG usage through the years. The data for the inventory was entered into a web-based campus carbon calculator, the Carbon MAP - Management and Analysis Platform, recommended by AASHE STARS[1]. All information comprised in this report is guided by the Carbon MAP data requirements, which served as the compass for what to record and report on. The Carbon MAP then calculated data behind the scenes to show total emissions and CO_2e (carbon dioxide equivalent).

This report outlines Saint Louis University's greenhouse gas emissions for FY14 (July1, 2013 – June 30, 2014), the results and breakdown of the emissions by Scope, peer comparisons, boundary, methodology, and institutional characteristics.

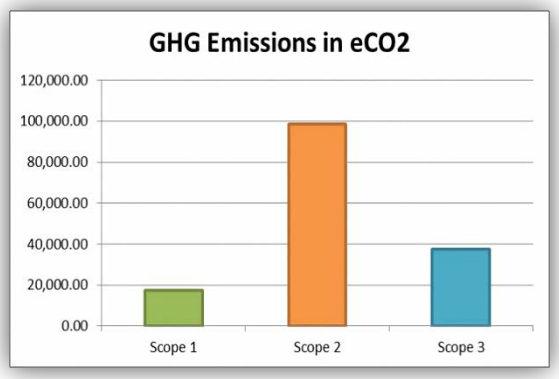
TABLE OF CONTENTS

[1] Association for the Advancement of Sustainability in Higher Education – Sustainability Tracking, Assessment & Rating System

EXECUTIVE SUMMARY

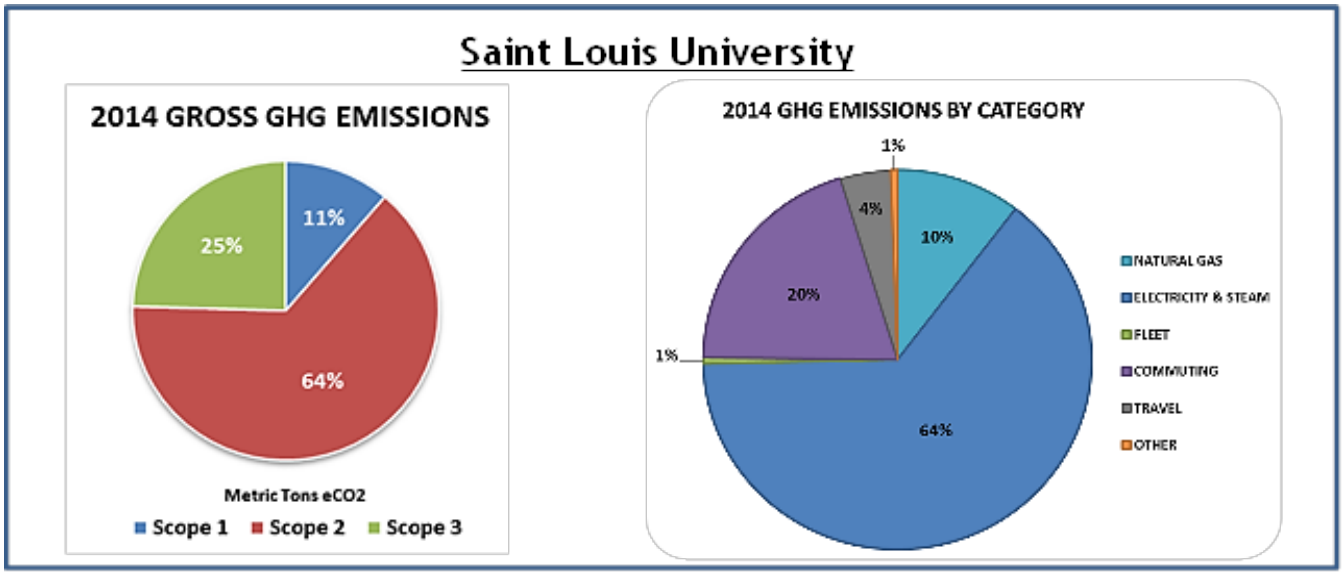
Climate change and the increase of GHGs in our atmosphere is one of the most pressing issues of our age. To work toward positive global citizenship, Saint Louis University recognizes the need to actively participate in creating a more sustainable environment by minimizing emissions. The first step toward that is to develop a grasp of the impact that campus operations have on the environment and to identify improvement areas. This first-ever Greenhouse Gas (GHG) emissions inventory, produced by the Department of Sustainability & Benchmarking, does just that.

Guided by the framework provided in the CarbonMAP campus carbon calculator, this inventory has allowed for the establishment of a baseline for Saint Louis University's (SLU) carbon footprint. This baseline is based on fiscal year 2014 (FY14) and utilized the Operational Control Approach, which meant inclusion of operations located in metro St. Louis that are owned and operated by the University.



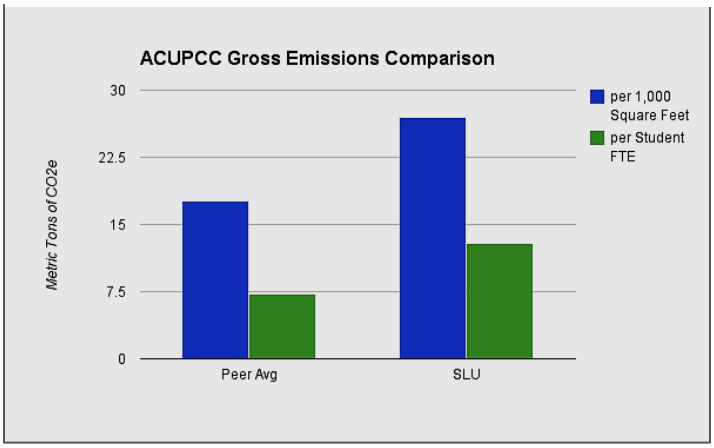
In FY14, SLU's total GHG emissions were approximately 153,408 metric tons of CO2e. As shown in the figures below, 74% were attributable to purchased utilities and 20% were attributable to commuting by campus users. Knowing these sources as the biggest contributors to campus emissions provides direction for the University in which emissions areas to focus on for improvement.

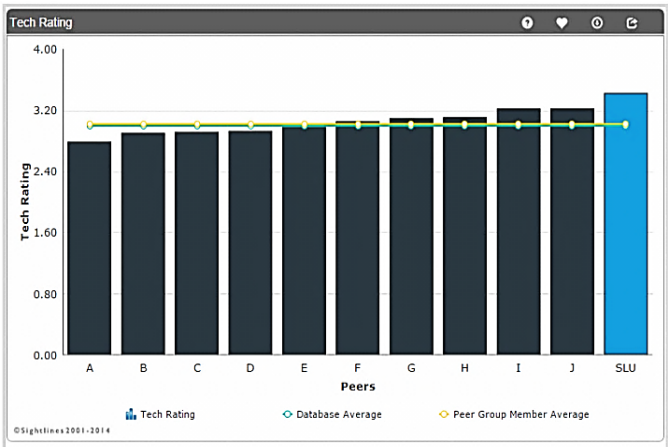
FIGURE 2 BREAK OUT OF EMISSIONS



The average per capita GHG emissions equaled 12.87 tons CO2e per student FTE[2]. In comparison with doctorate-granting university ACUPCC[3] signatories, SLU's emissions per student FTE was 79% greater than the peer average, but emissions per 1,000 square feet was only 35% above the group. The square foot comparison, however, does not take into account the types of space maintained by the doctorate-granting universities. According to Sightlines – facilities asset advisors, the technical complexity of SLU facilities was the highest among the selected peer group in FY14.

FIGURE 3 PEER BENCHMARKING





It is apparent from the results of this first inventory that SLU has some work to do in lowering campus emissions. Establishment of the Energy & Utilities strategic action team in Facilities Services and development of energy and water reduction goals are certainly steps in the right direction.

As shown below in Summary Statistics, SLU currently has 0% carbon offsets. During the spring 2015 semester, the University is installing 25kW solar arrays on 9 campus buildings. This is one of many future positive steps toward reducing energy emissions at SLU.

SUMMARY STATISTICS

FY14 Metrics	Total	Per Campus User	Per Student	Per 1,000 Square Feet	% Offset
Gross Emissions (Scope 1 + 2)	115,776.71	14.35	9.71	20.32	0%
Gross Emissions (Scope 1 + 2 + 3)	153,407.70	19.02	12.87	26.92	0%
Net Emissions	153,407.70	19.02	12.87	26.92	N/A

*Measured in Metric Tons of CO2e

[2] Student FTE or full-time equivalent (11,919) calculation as determined by Sightlines methodology from SLU Factbook student population data.
[3] American College & University President's Climate Commitment (ACUPCC)

FULL REPORT

INTRODUCTION

A greenhouse gas (GHG) inventory is a comprehensive analysis of all emissions created from energy used by an institution. As an initiative to increase sustainability-inspired actions, Saint Louis University (SLU) conducted its first greenhouse gas inventory in the fall of 2014. Since greenhouse gas emission reporting has been a requirement of the American College & University Presidents' Climate Commitment (ACUPCC), it has become ever more common for colleges and universities to conduct these inventories. Though SLU has not yet signed onto the ACUPCC, the institution recognizes the merit of greenhouse gas inventorying as a best practice for colleges and universities.

METHODOLOGY

SLU opted to use what is a common method for universities completing a GHG inventory: the CarbonMAP - Management and Analysis Platform. This is a web-based campus carbon calculator, which is designed specifically for college and university campus use. The CarbonMAP provides a user-friendly interface for users to understand and enter the necessary data to complete an inventory. All information comprised in this report is guided by the CarbonMAP data requirements, which served as the compass for what to record and report on. The CarbonMAP calculated data behind the scenes to show total emissions and CO2e (carbon dioxide equivalent).

CARBONMAP BACKGROUND INFORMATION

The CarbonMAP was created by Clean Air - Cool Planet, a non-profit that worked toward solutions for climate change, in conjunction with Sightlines, a private nationwide company that provides benchmarking, analysis, and facilities measurement services to colleges and universities. Cool Air - Clean Planet has since dissolved. Through the fall of 2014, the CarbonMAP was supported by the University of New Hampshire and Sightlines. Most recently, Sightlines has handed off all operational responsibilities of the CarbonMAP to the University of New Hampshire, who is now the sole operator of the CarbonMAP.

Because of the shift of ownership and operational support of the CarbonMAP, there were a few obstacles encountered in the beginning processes of learning how to use the tool. Main obstacles were unclear directions on getting started, partial lack of clear explanation in select sections, and abandoned sections of the online tool which created confusion. Despite these few complications, the CarbonMAP is the primary tool used by many colleges and universities to create GHG inventories because it is the most available and most comprehensive calculator for conducting GHG inventories.

DATA COLLECTION PROCESS

In order to collect all necessary data, all relevant departments of the University should be aware of the process and impact of the GHG inventory. There was only one outlier in the data collection process, but all other necessary data was collected over a period of 3 months as data requirements were better understood. All data requirements were met by either collection from existing public sources or from simple in-house communications and outreach techniques. Depending on the nature of the data gathered and the data needed for the CarbonMAP, some calculations were used to achieve exact numbers. See Detailed Data Collection in the Appendix for the listed departments of contact, data sources, and explanations for any assumptions made for all components of the GHG inventory.

DATA CONCEPTS

GREENHOUSE GASES

Greenhouse gases are gases which absorb infrared radiation (or radiated heat) in the atmosphere. The increase of these gases in the Earth's atmosphere creates atmospheric warming, which impacts global climate change. Carbon dioxide (CO2) is the most commonly heard of greenhouse gas because it is the most prevalent greenhouse gas in the Earth's atmosphere. Other significant greenhouse gases are methane (CH4), nitrous oxide (N2O), and fluorinated gases such as per fluorocarbons (PFCs) and hydro fluorocarbons (HFCs).

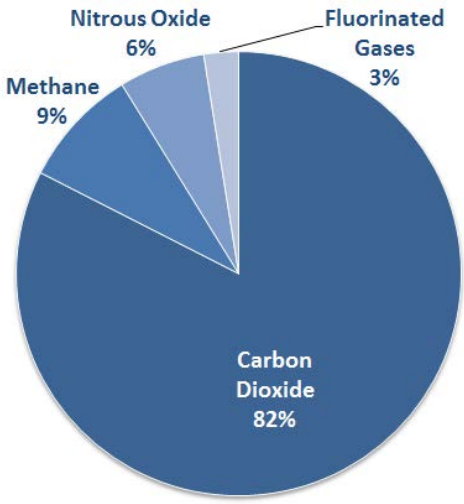
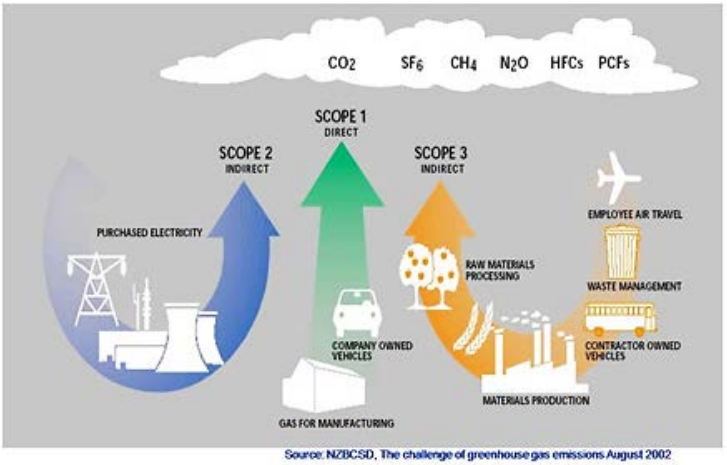


FIGURE 1: U.S. GREENHOUSE GAS EMISSIONS IN 2012
Note: Obtained from EPA website
http://www.epa.gov/climatechange/ghgemissions/gases.html

EMISSION SCOPES



Source: NZBCSD, The challenge of greenhouse gas emissions August 2002

Data for emissions is broken into three categories: Scope 1, Scope 2, and Scope 3. The minimum requirements for a GHG Inventory include Scopes 1 and 2, while Scope 3 remains optional. This is due to the nature of the emissions sources; Scopes 1 and 2 encompass concrete data of University operations, while Scope 3 includes data which is more difficult to track and is often extrapolated.

Emissions Categories & Explanation

Category	Definition	Emission Sources at SLU
Scope 1	Emissions which result from sources that are owned or operated by the institution or are combusted on site.	Fleet vehicles, natural gas for heating, refrigerants, and fertilizers.
Scope 2	Emissions which result from sources that are purchased by the institution; they are generated off-site and transported to the institution.	Purchased electricity and purchased steam
Scope 3	Emissions which result from sources that are not owned or operated by the institution, but they occur as a result of institutional activities.	Commutes to the University, business travel, waste disposal, and purchased office paper.

TABLE 1

Saint Louis University attempted a full detail of emissions; all of Scopes 1 and 2 were tracked, and major components of Scope 3. While most data in Scopes 1 and 2 are already recorded and tracked somewhere within the University, Scope 3 was not so. There were small challenges in collecting all data for Scope 3. Coincidentally, the University conducted a transportation survey at the same time that the GHG inventory was being processed, so a large component of Scope 3 emissions could be accounted for, which otherwise would not have been.

The transportation survey is representative of how campus users get to campus; of the roughly 18,000 campus users, there were around 1,000 people who filled out the survey. Survey respondents were asked to enter their home zip code and primary method of transportation. The data from the 1,000 people was then extrapolated to represent all SLU campus users. This data was used to determine passenger miles necessary for entry into the CarbonMAP.

SIGN USED IN SURVEY

EMISSIONS FACTORS

An emissions factor is a numerical representation of pollutant qualities in relation to pollutant source and activities. It helps determine the amount of emissions being released into the air. All emissions factors are default settings in the CarbonMAP with the exception of aviation gasoline (100LL). Though individualized emissions factors are more accurate, we used the default emissions factors provided because we have limited resources available to create individualized emissions factors for University sources. The methodology of the CarbonMAP emissions factors is unknown, but they appear to be gathered from national averages that are made public by the Environmental Protection Agency (EPA) and/or the Energy Information Administration (EIA). Additionally, the factors built into the CarbonMAP have been accepted as the de facto standard.

The aviation gasoline emissions factor came from the EPA published document, *Emission Factor for Greenhouse Gas Inventories*. Of the two main types of aviation gasoline: 100 and 100LL, SLU uses 100LL (low lead), which is also the most common form of aviation gasoline. Because of this, the emission factors for aviation gasoline are likely strongly representative of 100LL more so than of other aviation gasoline fuels.

University Details

Baseline

The baseline year for the inventory is fiscal year 2014 (July 1, 2013 - June 30, 2014). This year was selected because it was the most recent year and had the most readily available information. It is believed that the currency of the data makes it most relevant to the present and future. Because of this year selection for the baseline, our baseline year and performance year are the same and trend identification is not yet possible. We gathered only information on one year because, as this is the first year Saint Louis University has conducted a GHG inventory, this is also acting as the precedent process. A simple first run of the inventory process will allow for the education and knowledge of how to go through the process, and allow future inventorying to develop. This pilot process not only provides useful information to the University, but also provides a systematic process for future GHG inventories at SLU.

Boundary

The boundary for the GHG inventory was guided by an operational control approach methodology, which includes all buildings owned and operated by SLU with minor exceptions. This boundary approach means that the University reports and takes credit for 100% of all emissions from those buildings which are owned and operated by the University. Though the University operates each building, there may not be full control in some cases; select buildings may need approval for operational changes by stakeholders. Previous University reports of electric gross square footage were used to determine the buildings owned and operated by SLU.

All 3 campuses located in St. Louis are Included within the boundary - The Frost Campus (North campus), the Medical Center (South campus), and Scott Hall (the downtown law school). Exclusions of SLU properties from the GHG inventory are shown in Boundary Details in the Appendix.

EMISSIONS CATEGORY COMPONENTS

SCOPE 1 DETAILS

- **On-campus Stationary Natural Gas Usage** - Though natural gas is purchased, which originally lead us to believe it should be categorized in Scope 2, it is categorized in Scope 1 because the natural gas is combusted on-site at the University.
- **Fleet** - All University fleet vehicles are accounted for in this report with the exception of 5 vehicles used by Athletics, 4 SUVs and 1 car. Other than this missed information, Scopes 1 and 2 are comprehensive in their content. Our fleet includes 3 types of fuel used:

    - 100LL - This accounts for the 13 aircraft owned by the University. This should not be confused with university-funded air travel, which has different emissions factors because of different fuels used by commercial airlines and because of the different nature of travel.

    - Diesel - This accounts for 3 generators owned by the University, and 1 diesel tank which is used to fill various campus vehicles.

    - Gasoline - This accounts for 2 gasoline tanks on campus used by various campus vehicles, and for all gasoline purchased with Voyager gas cards for various campus vehicles.

- **Refrigerants & Chemicals** - There are two refrigerants used and tracked on campus, R410A and HCFC-22.
- **Fertilizer** - The University uses both organic and synthetic fertilizer. The default emissions factors in Carbon MAP for fertilizers (synthetic and organic) list only an emission factor for N2O. The reason there are no emission factors for CO2 carbon dioxide) or CH_4 (methane) is because fertilizers only deposit certain nutrients into the soil, nitrogen, phosphorous, and potash. Therefore they produce N2O (nitrous oxide) emissions, but not CO2 (carbon dioxide) or CH_4 (methane).

SCOPE 2 DETAILS

- **Purchased Electricity** - Electricity is used in all campus buildings.
- **Purchased Steam** - Steam consumption calculated based on all steam bills each quarter provided by Tenet Healthcare Systems and Trigen - St. Louis for the Medical Center and Downtown campuses. Steam consumption is measured in pounds on invoices. Used for heating in select buildings on campus, including: Scott Hall, Caroline Building, Doisy Hall, Learning Resource Center, School of Nursing and Schwitalla Hall.

SCOPE 3 DETAILS

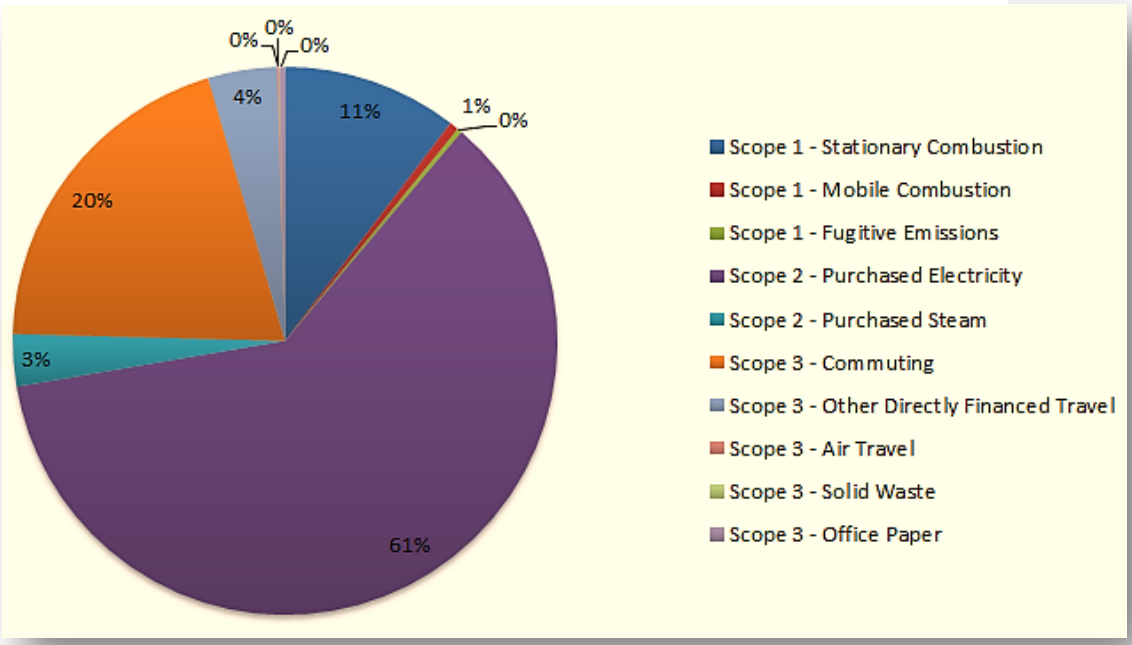
- **Commuting** - A large portion of Scope 3 emissions are caused from commuting. This data was extrapolated from a campus-wide transportation survey, of which nearly 1,000 people completed, to account for the entire University.
- **University Funded Travel** - This consists of all air, bus, car, and rail travel that is paid for by the University. Transportation to events such as conferences, athletic events, etc. fall into this category.
- **Solid Waste** - This takes into account all landfill waste, recycled materials, and compost. A unique feature of the landfill operated by Waste Management, Milam Landfill, used by the University is found in its Renewable Natural Gas Facility. This facility creates energy from already-existing landfill gases. The energy is pipeline-ready natural gas, and can be used to heat homes or fuel select truck fleets and other equipment that use compressed natural gas. Because of this type of landfill use, the University's emissions for solid waste are in the negative numbers.
- **Office Paper** - All office paper is accounted for and tracked by Business Services. Of all office paper used, 2.52% is from recycled content.

EMISSIONS BY SCOPE

In the following figures, the emissions categories and sources are shown. These figures display the total amount and breakdown of emissions produced by Saint Louis University in FY14.

FIGURE 2: TOTAL MTCO2E EMISSIONS FOR SAINT LOUIS UNIVERSITY

NOTE: Image captured from CarbonMAP



Data & Explanation of Figure 3

Category	mteCO2
Scope 1 - Stationary Combustion (refrigerants, fertilizers, natural gas)	15,953.15
Scope 1 - Mobile Combustion (fleet)	838.38
Scope 1 - Fugitive Emissions (leaks and escapee gases and vapors from pressurized equipment)	425.29
Scope 2 - Purchased Electricity	93,834.95
Scope 2 - Purchased Steam	4,724.94
Scope 3 - Commuting	30,746.20
Scope 3 - Other Directly Financed Travel (University funded travel of bus, car, and rail)	6,313.67
Scope 3 - Air Travel (from University funded travel - does not include air fleet)	125.45
Scope 3 - Solid Waste	-68.03
Scope 3 - Office Paper	513.7

The total gross emissions for Scope 1 totaled 17,216.82 metric tons CO2e, Scope 2 totaled 98,559.89 metric tons CO2e, and for Scope 3 the items included totaled 37,630.99 metric tons CO2e. SLU currently does not purchase any carbon offsets, so the total net emissions for the University equaled 153,407.70 metric tons CO2e. The emissions are shown by scope in Figure 3.

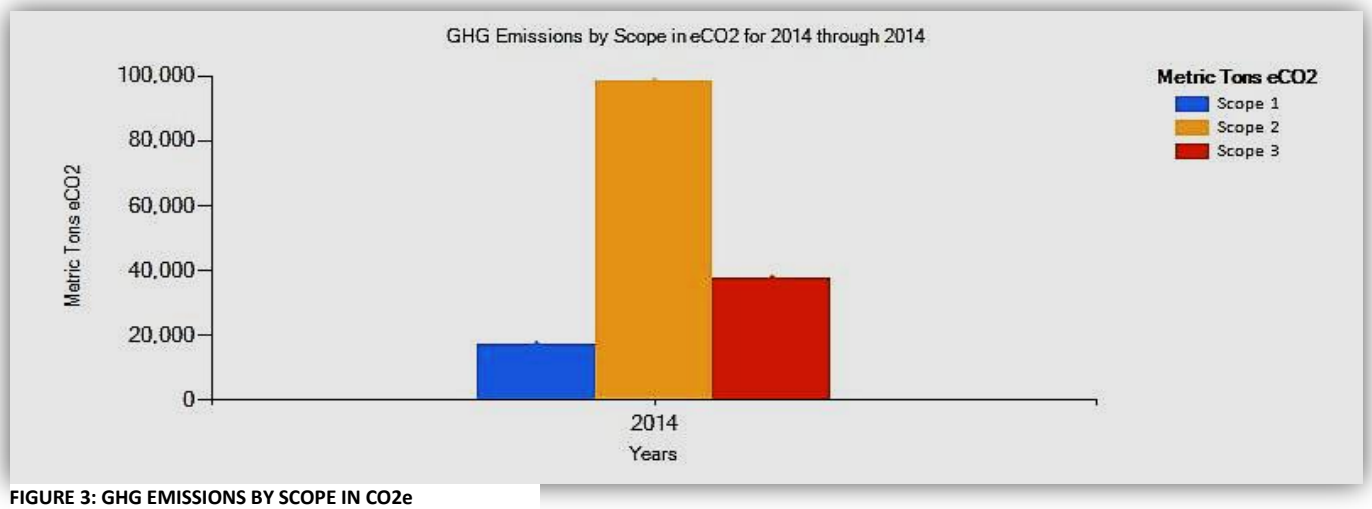


FIGURE 3: GHG EMISSIONS BY SCOPE IN CO2e
Note: Image captured from CarbonMAP

RECOMMENDATIONS & CONCLUSION

This section aims to provide recommendations and observations for future reporting by reflecting upon this GHG Inventory pilot process.

OBSERVATIONS:

- Learning about greenhouse gases was a bigger undertaking than expected. It would be difficult for the inventory to be done by individuals with no prior experience/ knowledge in areas of energy usage and data gathering, collecting, and compounding.
- This should not be done alone - it must be a collaborative effort and requires support and cooperation from many different departments and offices.
- Ample time to complete a full GHG Inventory should be allowed – this may be at least 2 months, but could be up to a full semester.

RECOMMENDATIONS:

It is first of all recommended that a GHG Inventory be conducted at a minimum biennially. It is advisable at this point to consider any emission sources that may have been overlooked in this baseline inventory, as well as to establish a formal framework for ongoing reporting. On the heels of completing this first inventory, it will be necessary to proactively plan for conducting the next inventory, so as to ensure that all sources and data contacts

are identified and data will be readily accessible. For example, the GHG team had difficulty collecting all fleet vehicle consumption data due to the decentralization of records and data for university travel was only available in dollars spent versus passenger miles, making only estimates available. Formalizing the GHG Inventory process will allow for data to be formatted more uniformly.

The GHG team also recognized that in the future it would be most beneficial to obtain supporting documentation, such as a sample of an invoice or report used, or at a minimum the file name/source/location, for all data points for additional validation. This would not only ensure the accuracy and replication of data collection, but also would be necessary for review in an internal and/or external verification process. SLU does participate in AASHE STARS reporting, which includes the credit OP-1: Greenhouse Gas Emissions. In OP-1, STARS asks if the GHG accounting and reporting process has been validated internally or externally. Due to time constraints, we were unable to have this GHG inventory verified. However, a logical outgrowth and current consideration stemming from this process is development of an emissions inventory management procedure that will include an internal review and verification by an independent party.

CONCLUSION:

Saint Louis University has made some tremendous strides in the past three years, including the establishment of waste diversion, energy intensity, and water intensity goals. The waste diversion goal is to achieve 30% waste diversion, while energy and water goals challenge the University to reduce consumption by 20% by 2020 over a 2013 baseline. Efforts and initiatives toward obtaining these goals will ultimately help to reduce the GHG emissions from campus operations. Additionally, the University recently began installation of solar photovoltaic arrays on nine buildings on-campus, which is only the beginning of bringing renewable energy sources to campus and reducing the campus carbon footprint. The immensity of information obtained in this GHG Inventory pilot process will allow for SLU to further its mission and reduce its ecological impact in line with creating “Higher Purpose. Greater Good.”

SAINT LOUIS UNIVERSITY
Higher purpose. Greater good.™

GLOSSARY

Carbon MAP	Carbon Management and Analysis Platform. A web-based carbon calculator for college and university campuses.
CO2e	Carbon dioxide equivalent. Also called eCO2 or global warming potential. This is a normalized unit which expressed any chemical's equivalency to carbon dioxide.
Emissions Factor	Numerical representation of pollutant qualities in relation to pollutant source and activities used to determine amount of emissions emitted into the air.
mtCO2e	Metric tons of carbon dioxide.
Scope 1	Includes emissions which result from sources that are owned or operated by the institution or are combusted on site.
Scope 2	Includes emissions which are generated off-site; purchased and transported to the institution.
Scope 3	Includes emissions which result from sources that are not owned or operated by the University, but occur as a result of University activities.

APPENDICES

EMISSIONS INVENTORY METHODOLOGY AND BOUNDARIES

Period covered in this report	FY14 (July 1, 2013 – June 30, 2014)
Consolidation methodology used to determine organizational boundaries	*Operational control approach* Total square footage of downtown, frost and med campuses with 18% of parking garages
If any institution-owned, leased, or operated buildings or other holdings that should fall within the organizational boundary are omitted, briefly explain why	Excluding vacant, leased, and remote spaces as utility service data is either unavailable and/or the institution is not responsible for the operations of the property
Emissions calculation tool used	Carbon MAP (Management and Analysis Platform)
Describe why tool was selected	The Clean Air Cool Planet tool was selected because it was developed specifically for college and university campuses. The inventory was recorded in the new online Carbon MAP (Management and Analysis Platform) tool
Who primarily conducted this emissions inventory?	Department of Sustainability & Benchmarking in the Division of Facilities Services
Describe the process of conducting the inventory	This first ever inventory for SLU was conducted internally and is composed of data that was readily available from the most recent fiscal year. It will serve as the baseline for future inventories. In order to track data sources and responsible party contact, all data collected was entered into a spreadsheet tracking document before entry into CarbonMAP
Describe any data limitation and any major assumptions made in response to these limitations	Data not centralized, sources not easily identified, documentation for an internal verification process. Some data was not comprehensive and estimates were used. Barriers existed with regard to data collection and unit of measure compatibility (i.e. travel expenses vs. mileage)

BOUNDARY DETAILS

Buildings Excluded from SLU Boundary

Remote sites	• Lay Center for Education & the Arts (a meeting and retreat center), located in Louisiana, Missouri. • Reis Biological Station, located in Steelville, Missouri • The Center for Aviation Science, located in Cahokia, Illinois • The Madrid Campus, which is located in Madrid, Spain. • Other remote medical and office buildings in St. Louis
Sites leased to private companies	• Saint Louis University Hospital (leased to Tenet) • Diablitos Mexican Restaurant • Vito's Sicilian Pizzeria & Ristorante • The Flats (student housing)
Sites owned, but not operated by the University	• Hotel Ignacio • Saint Francis Xavier College Church • Church Parish
Vacant sites located in or near the University	• Two buildings on campus • Three buildings off campus

EMISSIONS DATA

Emissions from the following sources (in metric tons of CO2e)

Scope 1: Direct Emissions	
Stationary Combustion	15,953.15
Mobile Combustion	838.38
Fugitive Emissions	425.29
Total Scope 1 Emissions	17,216.82
Scope 2: Indirect Emissions	
Purchased Electricity	93,834.95
Purchased Steam	4,724.94
Total Scope 2 Emissions	98,559.89
Scope 3 Emissions	
Commuting	30,746.20
Air Travel	125.45
Other Financed Travel	6,313.67
Solid Waste	-68.03
Office Paper Purchasing	513.70
Total Scope 3 Emissions	37,630.99

INSTITUTIONAL CHARACTERISTICS

Building Space	
Gross square feet of building space	7,554,573
Net assignable square feet of laboratory space	408,652
Net assignable square feet of health care space	65,299
Net assignable square feet of residential space	616,505
Gross square feet of parking structures	1,611,507
Gross square feet of athletic space	120,250
Population	
Total Student Enrollment (FTE)	11,919
Residential Students	3,868
FTE Faculty	2,363
Full-time Faculty	1,562
Part-time Faculty	1,602
FTE Staff	2,929
Full-time Staff	2,812
Part-time Staff	233
Campus Users (CarbonMAP calculation)	**8,066**
Other Contextual Data	
Carnegie classification	Doc/Research
Control	Private non-profit
Climate zone	4A Mixed-Humid
Endowment size	$1,076,959,000
Total Heating/Cooling Degree Days	6,864
Budget	
Total Operating Budget	$741,971,000
Research Budget	$36,869,000
Energy Budget	$11,652,556

DETAILED DATA COLLECTION

The following tables show the data included in each Scope and how it was obtained, along with any identified limitations:

SCOPE 1

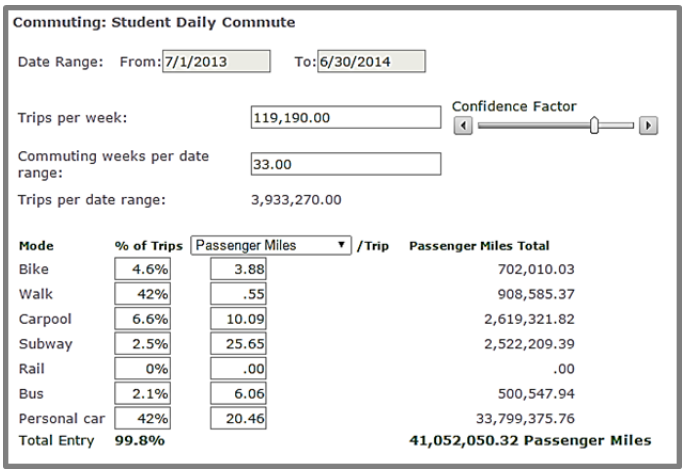
Scope 1	FY14 Total	Responsible Party	Data Source
PURCHASED NATURAL GAS			
Gas Consumption (mmbtu) (includes 2 Med campus human & animal incinerators)	299,965.3	Facilities Services	Laclede Gas Invoices Dashboard - Utilities
FLEET	**65,145.64**		
Facilities Univ. Vehicles (gal)	38,899.76	Facilities Services	Vendor Reports
Other Univ. Vehicles (gal)	28,009.28	Various Departments	Internal Tracking
REFRIGERANTS & CHEMICALS (Total)	**641.6**		
HCFC-22 (lbs) (6 mos. data was available: estimated for full fiscal year)	623	Facilities Services	Internal tracking
R-409A (R-410A in Carbon MAP) (lbs) (6 mos. data was available: estimated for full fiscal year)	18.6	Facilities Services	Internal tracking
FERTILIZER (Total)	**92,205**		
Organic (lbs)	64,440	Grounds Services	Internal tracking
Synthetic (lbs)	27,765	Grounds Services	Internal tracking

SCOPE 2

Scope 2	FY14 Total	Responsible Party	Data Source
PURCHASED ELECTRICITY			
Electric Consumption (kWh)	117,618,023	Facilities Services	Ameren UE Invoices Dashboard - Utilities
PURCHASED STEAM			
Steam Consumption (lbs) Downtown & Med Campuses	64,749,215	Facilities Services	TriGen & Tenet Invoices Dashboard - Utilities

STUDENT COMMUTING

Comments:
Assuming only academic year 2013-14
Total # academic year weeks - 3 weeks winter break - 1 week spring break - (8 other holiday days/5 days in a week)
http://www.slu.edu/x22706.xml
Each individual is assumed to take 10 trips to/ from campus a week, making "trips per week" showing amount of student multiplied by 10.



Commuting: Student Daily Commute

Date Range: From: 7/1/2013 To: 6/30/2014

Trips per week: 119,190.00 Confidence Factor

Commuting weeks per date range: 33.00

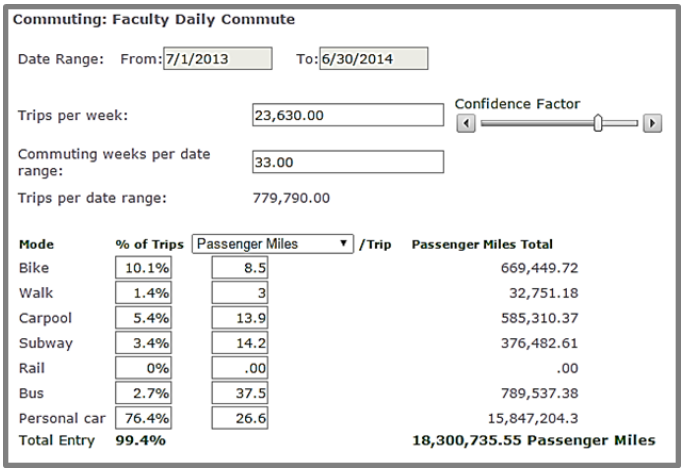
Trips per date range: 3,933,270.00

Mode	% of Trips	Passenger Miles /Trip	Passenger Miles Total
Bike	4.6%	3.88	702,010.03
Walk	42%	.55	908,585.37
Carpool	6.6%	10.09	2,619,321.82
Subway	2.5%	25.65	2,522,209.39
Rail	0%	.00	.00
Bus	2.1%	6.06	500,547.94
Personal car	42%	20.46	33,799,375.76
Total Entry	99.8%		41,052,050.32 Passenger Miles

CARBON MAP SCREENSHOT

FACULTY COMMUTING

Comments:
Assuming only academic year 2013-14
Total # academic year weeks - 3 weeks winter break - 1 week spring break - (8 other holiday days/5 days in a week)
http://www.slu.edu/x22706.xml
Each individual is assumed to take 10 trips to/ from campus a week, making "trips per week" showing amount of faculty multiplied by 10.



Commuting: Faculty Daily Commute

Date Range: From: 7/1/2013 To: 6/30/2014

Trips per week: 23,630.00 Confidence Factor

Commuting weeks per date range: 33.00

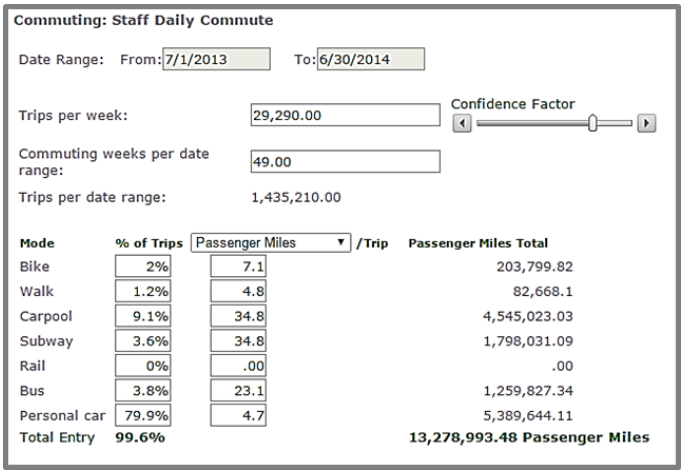
Trips per date range: 779,790.00

Mode	% of Trips	Passenger Miles /Trip	Passenger Miles Total
Bike	10.1%	8.5	669,449.72
Walk	1.4%	3	32,751.18
Carpool	5.4%	13.9	585,310.37
Subway	3.4%	14.2	376,482.61
Rail	0%	.00	.00
Bus	2.7%	37.5	789,537.38
Personal car	76.4%	26.6	15,847,204.3
Total Entry	99.4%		18,300,735.55 Passenger Miles

CARBON MAP SCREENSHOT

STAFF COMMUTING

Comments:
Total year minus holiday time (13 days)
Each individual is assumed to take 10 trips to/ from campus a week, making "trips per week" showing amount of staff members multiplied by 10.



Commuting: Staff Daily Commute

Date Range: From: 7/1/2013 To: 6/30/2014

Trips per week: 29,290.00 Confidence Factor

Commuting weeks per date range: 49.00

Trips per date range: 1,435,210.00

Mode	% of Trips	Passenger Miles /Trip	Passenger Miles Total
Bike	2%	7.1	203,799.82
Walk	1.2%	4.8	82,668.1
Carpool	9.1%	34.8	4,545,023.03
Subway	3.6%	34.8	1,798,031.09
Rail	0%	.00	.00
Bus	3.8%	23.1	1,259,827.34
Personal car	79.9%	4.7	5,389,644.11
Total Entry	99.6%		13,278,993.48 Passenger Miles

CARBON MAP SCREENSHOT

SCOPE 3 – SOLID WASTE

SOLID WASTE	FY14 Total	Responsible Party	Data Source
Landfilled Waste Total	**2,264.86**		
Landfilled Waste (short tons)	2,264.86	Facilities Services	Vendor Reports
Type of Landfill	CH4 Recovery & Electric Generation	Waste Management	Vendor Reports
Recycled Waste: Commingled Total	**483.11**		
Single-Stream Recycling (short tons)	352.33	Facilities Services	Vendor Reports
Shredded paper (short tons)	130.78	Facilities Services	Vendor Reports
Composted Waste Total	**214.95**		
Total Composting: On-campus (short tons) Tons of Yard Waste Composted at SLU Tons of Food Compost at Fresh Gatherings	193.35	Facilities Services	Internal Tracking
Total Composting: Off-campus (short tons) Tons of Yard Waste Hauled Away	21.60	Facilities Services	Vendor Reports

SCOPE 3 – UNIVERSITY FUNDED TRAVEL

TRAVEL	FY14 Total	Responsible Party	Data Source	Notes
Total Passenger Miles	30,952,631			
Air (Passenger Miles)	28,838,209	Controller	Internal Reporting Air Travel	Calculation based on avg. cost per mile travelled
Bus (Passenger Miles)	709,837.04	Controller	Internal Reporting Taxi/Metro/Subway/Bus Travel	Calculation based on avg. fare per miles
Car (Passenger Miles)	1,390,213.56	Controller	Internal Reporting Car Rental/ Personal Mileage Reimbursement	Calculation based on per mile reimbursement
Rail (Passenger Miles)	14,371.11	Controller	Internal Reporting Train or Bus	Calculation based on Amtrak's avg. cost per mile

SCOPE 3 – OFFICE PAPER PURCHASING

OFFICE PAPER	FY14 Total	Responsible Party	Data Source
UnCoated FreeSheet (pounds)	**372,539.76**	Business Services	STAPLES Report
0% recycled content	356,214.26		
30-49% recycled content	8,325.00		
50-69% recycled content	1,545.50		
90-100% recycled content	6,455.00		

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