

GREENHOUSE GAS INVENTORY FY 2011 UPDATE

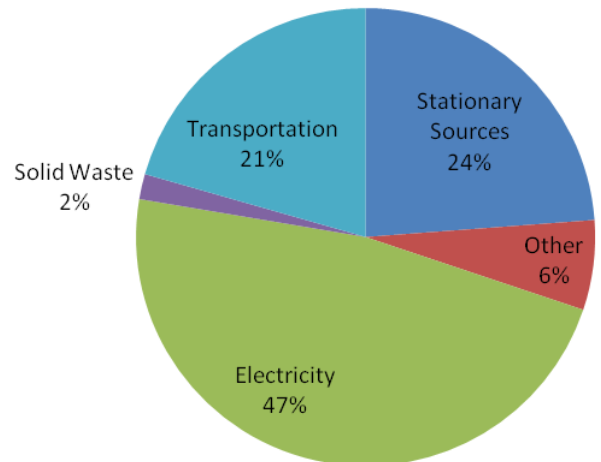
OVERVIEW

Temple University (Temple) has prepared a greenhouse gas (GHG) inventory program in support of its participation in the American College and University Presidents' Climate Commitment (ACUPCC). This inventory is an update which summarizes Temple's fiscal year (FY) 2011 GHG emissions and supplements the previously published inventory for fiscal years 2006 through 2010.

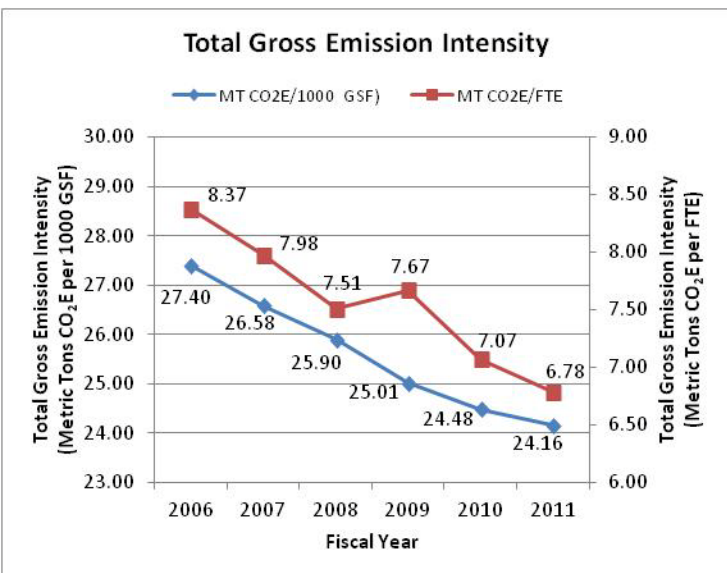
In FY 2011, Temple University's total gross emissions were 218,783 metric tons of carbon dioxide equivalent (MTeCO₂). Of the total emissions, 47% were attributable to purchased electricity consumption, 24% to stationary sources and 21% to transportation activities with a large portion attributable to commuting. Mobile sources (university fleet), refrigerants, fertilizers, purchased steam, solid waste, and transmission and distribution losses made up the remainder, approximately 8% of the total emissions. Temple's total gross emissions were reduced to a net of 215,115 MTeCO₂ through carbon offsets.

The primary emission sources were purchased electricity, stationary combustion, and commuting (student, faculty and staff), collectively accounting for approximately 87% of total annual gross emissions.

GHG Emissions by Source, FY 2011



TRENDS FROM FY 2010 TO FY 2011



Total gross emissions decreased by 1.3% from FY 2010 to FY 2011. The largest decrease occurred in Scope 1 stationary emissions because less natural gas and fuel oil were used in FY 2011 than FY 2010 (refer to the Greenhouse Gas Emissions Summary below)

In FY 2011, total gross emission intensity per 1000 gross square feet (GSF) declined by 1.3% and total gross emission intensity per full-time equivalent students (FTE) declined by 4.0% relative to FY 2010. Normalizing emissions by variables such as square footage and population is helpful to establish trends.

As of February 2012, average emission intensities for reporting ACUPCC peer institutions are 19.13 MTeCO₂/1000 GSF and 7.57 MTeCO₂/FTE. Temple's emission intensity is slightly higher on a GSF basis and slightly lower on a FTE basis.

GREENHOUSE GAS EMISSIONS SUMMARY

		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Scope 1 Emissions (MTCO ₂ E)	Stationary (oil, natural gas, propane)	58,850	56,886	46,749	62,592	56,616	52,097
	Mobile (University fleet)	615	639	621	890	856	907
	Fugitive (Refrigerants & Cryogenic CO ₂)	1,764	1,702	1,682	2,301	2,295	2,288
	Process (Agriculture/Fertilizer)	14	11	13	6	4	6
	Total Gross Emissions Scope 1	61,244	59,237	49,065	65,788	59,771	55,298
Scope 2 Emissions (MTCO ₂ E)	Purchased Electricity	105,124	100,322	103,758	101,025	103,982	103,937
	Purchased Steam	287	329	342	372	365	361
	Total Gross Emissions Scope 2	105,411	100,651	104,099	101,397	104,346	104,298
Scope 3 Emissions (MTCO ₂ E)	Faculty/Staff Commuting	11,480	11,405	11,577	11,832	9,404	9,112
	Student Commuting	25,692	25,766	26,625	27,749	23,798	24,480
	Air Travel	7,047	7,868	7,950	8,605	9,874	11,399
	Solid Waste	5,229	4,981	4,639	3,994	4,211	3,897
	Transmission & Distribution Losses	10,412	9,939	10,280	10,011	10,303	10,299
	Total Gross Emissions Scope 3	59,860	59,960	61,071	62,191	57,590	59,187
Scope 1-3 Gross Emissions (MTCO ₂ E)	Total Gross Emissions	226,515	219,848	214,235	229,376	221,707	218,783
	Gross Square Footage (GSF)	8,266,175	8,271,765	8,271,765	9,171,147	9,055,532	9,055,532
	Full-time Equivalent Students (FTE)	27,055	27,560	28,535	29,901	31,363	32,251
	Total Gross Emission Intensity per 1000 GSF	27.40	26.58	25.90	25.01	24.48	24.16
	Total Gross Emission Intensity per FTE Student	8.37	7.98	7.51	7.67	7.07	6.78
Scope 1-3 Net Emissions (MTCO ₂ E)	Offsets	-157	-2,344	-3,484	-5,144	-3,056	-3,668
	Total Net Emissions	226,358	217,504	210,751	224,232	218,650	215,115
	Total Net Emission Intensity per 1000 GSF	27.38	26.29	25.48	24.45	24.15	23.76
	Total Net Emission Intensity per FTE	8.37	7.89	7.39	7.50	6.97	6.67

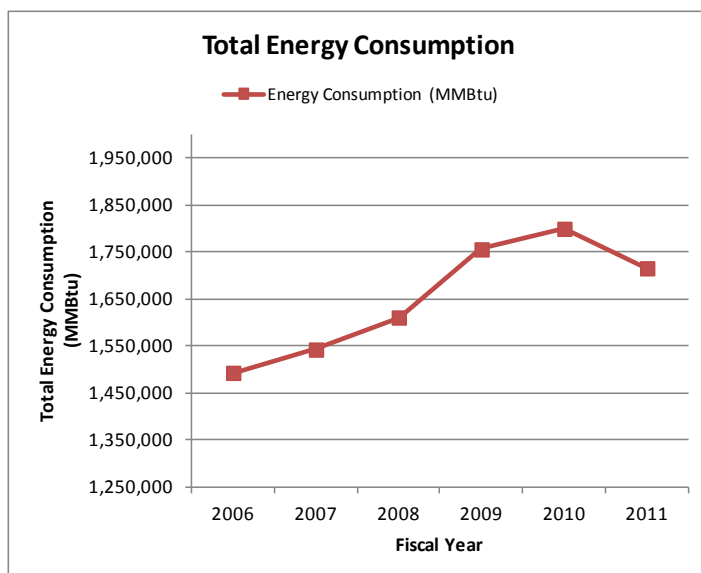
TOTAL GROSS EMISSIONS REPORTED TO ACUPCC¹

226,219 223,497 218,284 233,138 230,567

EMISSION REDUCTIONS

Stationary source emissions, a significant contributor to Temple’s emissions, were reduced in FY 2011 by 4,519 MTeCO₂. Less natural gas and fuel oil were used in FY 2011 and electricity usage remained constant. Overall energy consumption decreased by almost 5% from FY 2010 to FY 2011. The energy reduction trend may be attributed to:

- Upgrades to the underground steam distribution piping system;
- Emphasis on building energy conservation, including temperature setbacks, system shutdowns when possible and implementation of temperature standards;
- Installation of more efficient HVAC technology, including building automation systems and variable speed drives.



¹ Refer to Reporting Methodology section of this report

Another notable reduction occurred in solid waste with a 314 MTeCO₂ reduction from FY 2010. From CY 2010 to FY 2011, trash amounts decreased by 265.7 tons with the largest decrease seen in the residence halls. The trash reduction trend may be attributed to:

- Individual recycling containers provided in residential halls beginning in 2011 (installed during 2010-2011 winter break);
- Additional recycling containers and signage provided at the Liacouras Center (installed during RecycleMania 2011);
- Introduction of swap tables in 2011 which provide rescued office supplies and other donated items to the Temple community for reuse, thereby diverting the items from the landfill;
- The installation of water bottle refilling stations to reduce the number of single use bottles. At the end of FY 2011, there were 29 water bottle refilling stations throughout the University, which resulted in the diversion of 382,114 single use bottles from entering the waste stream.

Temple increased its compressed natural gas fleet from 16 vehicles in FY 2010 to 21 vehicles in FY 2011. This resulted in reduced diesel consumption.

Temple reduced FY 2011 GHG emissions from 218,783 MTeCO₂ to 215,115 MTeCO₂ (a 3,668 MTeCO₂ reduction) through offsets generated by the following on-campus activities:

- Composting (24 tons at Ambler campus);
- University computer reuse and recycling (4,784 units);
- Construction waste recycling (360 tons for Pearson McGonigle).

REPORTING METHODOLOGY

The Greenhouse Gas Inventory quantifies Temple's anthropogenic GHG emissions from energy consumption, waste disposal, agricultural activities, use of chemicals and refrigerants, and commuter transportation choices and tracks emissions of three primary greenhouse gases: carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Using the methodology of Clean Air Cool Planet eCalculator tool (version 6.7), GHG emissions are expressed in Metric Tons of Carbon Dioxide Equivalent (MTeCO₂). The individual greenhouse gases are converted to carbon dioxide equivalent values using the global warming potential (GWP) of the respective gases to convert them to common units. The total MTeCO₂ is the sum of the emissions from each source. Data for each emission source was collected in a GHG scorecard and was used to populate the CA-CP Campus Carbon Calculator.

The FY 2011 GHG Inventory was generated using version 6.7 of the CA-CP Campus Carbon Calculator. Previous inventories used earlier versions of the calculator which reflected different emission multipliers for electricity after 2006. In version 6.7, the electricity emission multiplier was decreased resulting less GHG emissions for both electricity and commuting. Therefore, the total gross emissions for FY 2007–2010 are lower using version 6.7 than what was previously reported to the ACUPCC. Total emissions for FY 2006-2011 have been recalculated using version 6.7 and the updated values are reflected in the Greenhouse Gas Emissions Summary.

Inventory boundaries and definitions are summarized as follows:

GHG Accounting Protocols	World Resources Institute/World Business Council for Sustainable Development (WRI/WBCSD) GHG accounting protocols in conjunction with the Clean Air – Cool Planet (CACP) Campus Carbon Calculator (v6.7)
Organizational Boundary	Includes only those campuses where the university has operational control and can enforce a change in policy. Includes: Main, Ambler, Health Sciences, Podiatric and Tyler campuses. Excludes: Temple University Health System and Center City, Harrisburg, Fort Washington and International Campuses.
Operational Boundary	Scope 1 – Direct emissions: stationary sources (natural gas, oil, propane), mobile sources (leased/owned University fleet), process sources (application of fertilizer), fugitive sources (refrigerant leakage, usage of CO ₂). Scope 2 – Indirect emissions (those outside of the organizational boundary) from purchased electricity and steam. Scope 3 – Other indirect emissions from employee and student commuting, employee air travel, landfilled solid waste, and transmission and distribution losses.
<i>De minimis</i> threshold	5% - Emission sources that collectively account for a small percentage of entity-wide emissions (<5%) can be called <i>de minimis</i> and may be approximated. Temple’s <i>de minimis</i> sources include mobile sources, process sources, fugitive sources, purchased steam, and landfilled solid waste.
Baseline Year	Fiscal year 2005-2006 (FY 2006). This is the first year for which complete, verifiable emissions data is available.
Emissions Intensity Metric	Gross square footage (GSF) and full-time equivalent students (FTE). These are used to normalize emissions to account for institutional growth over time.
Reporting Frequency	Fiscal year (July 1 to June 30) reporting. Report FY 2006-2008, update FY 2009, FY 2010 and FY 2011 with reporting at least every other year subsequently.

ACKNOWLEDGEMENTS

The Office of Sustainability would like to thank the following Temple University affiliates who contributed information and data to the FY 2011 GHG Inventory: Kurt Bresser, Facilities Management; David Broadus, Division of Student Affairs; Marshall Budin, Facilities Management; Rafael DeLuna, Office of University Housing; James DeNofa, Facilities Management; Janice Dietz, Campus Safety Services; Robert Gage, Sponsored Research Programs; Mark H. Gottlieb, Facilities Management; Richard Hetherington, Human Resources; Craig Jankowski, Liacouras Center; Jonathan Latko, Computer Recycling Center; Tom McCresh, Facilities Management; David J. McDonough, Environmental Health & Radiation Safety; Tim Thiess, Athletics Business and Administration; John Moore III, Dept. of Institutional Research; Anthony Morris, Facilities Management Podiatric Medicine; Robert W. O’Malley, Office of the VP for Research; Kurt Pflugfelder, Scheduling and Space Management; Ramona Richardson, Office of Business Services; Craig Roncace, Facilities Management.

ATTACHMENTS

*GHG Scorecard
Emissions Summary
Responsible Parties*

<h1 style="text-align: center;">GHG SCORECARD</h1> <h2 style="text-align: center;">Reporting Year FY 2011</h2>			Campus Name:		Temple University ^a (Main, Tyler, Podiatry, Ambler, Health Sciences, and Residence Halls)					
			Campus Location (Address, City, State):		Office of Sustainability, Mitten Hall Lower Level 1913 N. Broad Street, Philadelphia, PA 19122					
			Contact Person:		Sandy McDade, Director					
			Phone Number:		215-204-2517					
			Email:		smcdad01@temple.edu					
			Notes		Units	Fiscal Year 2005-2006	Fiscal Year 2006-2007	Fiscal Year 2007-2008	Fiscal Year 2008-2009	Fiscal Year 2009-2010
Intensity Metrics	1.1	Total Building Space Gross Square Footage	ft ²	8,266,175	8,271,765	8,271,765	9,171,147	9,055,532	9,055,532	
	1.2	Full Time Equivalent Students ^b	Unitless	27,055	27,560	28,535	29,901	31,363	32,251	
	1.3	Operating Budget	\$	804,240,000	842,030,000	902,984,000	974,851,000	1,004,230,000	1,073,697,000	
	1.4	Research Expenditures	\$	83,062,000	75,754,000	80,724,000	88,836,915	97,983,104	102,985,869	
	1.5	Energy Expenses	\$	23,319,394	20,838,548	23,760,037	25,655,691	23,193,373	24,679,710	
	1.6	Research Building Space Gross Square Footage	ft ²	775,083	778,779	789,632	856,684	893,309	929,079	
	1.7	Full Time Students	Unitless	25,280	25,863	26,892	28,513	30,034	30,861	
	1.8	Part Time Students	Unitless	5,325	5,092	4,929	4,165	3,987	4,171	
	1.9	Summer School Students	Unitless	4,282	4,360	4,223	4,244	3,914	5,752	
	1.10	Faculty (Full Time Equivalent) ^b	<i>Include Harrisburg, TUCC and Fort Washington campuses, but are assumed to be non material</i>	Unitless	2,239	2,209	2,260	2,354	2,419	2,416
	1.11	Staff (Full Time Equivalent) ^b		Unitless	4,239	4,307	4,351	4,395	4,171	3,998
Scope 1 Emissions	2.1	Stationary Sources								
	2.1.1	Natural Gas	MMBtu	156,252	316,359	849,082	732,042	1,036,547	957,074	
	2.1.2	No. 2 Fuel Oil	Gallon	369,875	183,084	168,099	160,666	162,986	140,763	
	2.1.3	No. 6 Residual Oil	Gallon	3,982,568	3,254,949	9,315	1,888,688	9,606	2,955	
	2.1.4	Propane	Gallon	4,474	4,039	3,249	4,565	2,198	0 ^f	
	2.2	Mobile Sources - Owned and Leased								
	2.2.1	Diesel	Gallon	20,131	23,030	19,349	26,576 ^e	24,241	20,354	
	2.2.2	Gasoline	Gallon	43,804	43,264	45,095	66,506 ^{d,e}	63,008	63,476	
	2.2.3	Compressed Natural Gas	GGE	3,533	3,337	3,868	4,598	8,126	22,182	
	2.3	Process Sources								
	2.3.1	Cryogenic CO ₂	Pounds	227,322	90,357	46,613	193,720	179,820	165,901	
	2.4	Fugitive Sources	<i>Refrigerants covered under the Kyoto Protocol and Climate Registry are HFC's (not CFC's or HCFC's).</i>							
	2.4.1	HFC-134a Refrigerant Leakage	Pounds	2,817	2,817	2,817	3,753	3,753	3,753	
	2.5	Agriculture								
2.5.1	Fertilizer Application - Synthetic	<i>Assumes 20.66% nitrogen content (FY11)</i>	Pounds	17,130	14,581	14,223	7,501	4,510	6,176	
2.5.2	Fertilizer Application - Organic	<i>Assumes 5% nitrogen content</i>	Pounds	50	375	0	0	500	4,700	
Scope 2 Emissions	3.1	Electricity usage	kWh	200,479,805	207,550,363	214,657,304	209,003,913	215,121,198	215,028,902	
	3.2	Purchased Renewable Electricity (Refer to Offsets)	kWh	240,000	4,786,000	4,546,000	0	0	0	
	3.3	Purchased Steam	MMBtu	3,807	4,357	4,528	4,933	4,832	4,785	

GHG SCORECARD

Reporting Year FY 2011

Campus Name:	Temple University ^a (Main, Tyler, Podiatry, Ambler, Health Sciences, and Residence Halls)
Campus Location (Address, City, State):	Office of Sustainability, Mitten Hall Lower Level 1913 N. Broad Street, Philadelphia, PA 19122
Contact Person:	Sandy McDade, Director
Phone Number:	215-204-2517
Email:	smcdad01@temple.edu
Notes	Units

		Notes	Units	Fiscal Year				Fiscal Year	
				2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Scope 3 Emissions	4.1	Commuting		<i>Commuting estimate scales results of 2007 Transportation Survey by changes in population.</i>				<i>Results of 2010 Transportation Survey</i>	
	4.1.1.1	Students - Personal Vehicle and Carpool	miles	40,423,487	41,098,357	42,469,074	44,261,494	43,730,922	44,985,741
	4.1.1.2	Students - Bus	miles	12,075,649	12,277,252	12,686,724	13,222,171	8,082,767	8,314,695
	4.1.1.3	Students - Light Rail	miles	14,703,838	14,949,318	15,447,909	16,099,893	10,619,730	10,924,453
	4.1.1.4	Students - Commuter Rail	miles	23,965,406	24,365,508	25,178,149	26,240,801	22,546,479	23,193,430
	4.1.2.1	Faculty - Personal Vehicle and Carpool	miles	8,841,388	8,722,924	8,924,313	9,295,501	5,380,854	5,374,181
	4.1.2.2	Faculty - Bus	miles	505,092	498,324	509,829	531,034	72,431	72,341
	4.1.2.3	Faculty - Light Rail	miles	2,271,375	2,240,941	2,292,679	2,388,038	461,153	460,581
	4.1.2.4	Faculty - Commuter Rail	miles	1,834,940	1,810,354	1,852,150	1,929,186	2,381,676	2,378,722
	4.1.3.1	Staff - Personal Vehicle and Carpool	miles	11,600,767	11,786,861	11,907,274	12,027,688	14,908,249	14,289,902
	4.1.3.2	Staff - Bus	miles	3,673,904	3,732,839	3,770,973	3,809,108	1,213,516	1,163,183
	4.1.3.3	Staff - Light Rail	miles	4,082,329	4,147,816	4,190,190	4,232,563	2,029,827	1,945,636
	4.1.3.4	Staff - Commuter Rail	miles	4,840,899	4,918,544	4,968,802	5,019,049	2,837,898	2,720,191
	4.1.4.1	Summer School Students - Personal Vehicle and Carpool	miles	1,238,925	1,261,493	1,221,855	1,227,931	1,068,849	1,570,777
	4.1.4.2	Summer School Students - Bus	miles	370,102	376,844	365,003	366,818	197,555	290,326
	4.1.4.3	Summer School Students - Light Rail	miles	450,653	458,862	444,443	446,654	259,562	381,451
	4.1.4.4	Summer School Students - Commuter Rail	miles	734,507	747,887	724,387	727,989	551,070	809,850
	4.2	Employee Business Air Travel^g	miles	9,076,920	10,134,582	10,240,294	11,083,249	12,717,634	14,682,240
4.3	Solid Waste								
4.3.1	Solid Waste landfilled	U.S. Tons	4,440	4,229	3,940	3,390	3,574	3,308	
4.3.2	Incinerated Waste ^c (waste to energy plant not used for school power)	U.S. Tons	35	31	42	12.6	12.8	16.5	

		Notes	Units	Fiscal Year				Fiscal Year	
				2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011
Offsets		RECs	kWh	240,000	4,786,000	4,546,000	0	0	0
		Composting (on-campus)	U.S. Tons	80	80	0	35.9	36.8	24.0
		Computer recycling	MTeCO ₂	0	0	0	3,199	3,042.0	3,107.0
		Construction Waste Recycling	MTeCO ₂	0	0	0	1,931	0.0	552.0

Notes:

a Includes only those campuses where the university has operational control (excludes Center City, Harrisburg, Ft. Washington, Japan, and the Health System facilities, including Temple University Hospital buildings located on the Health Sciences Campus)

b FTE numbers reflected those reported by Temple University. Temple calculates FTE as full-time plus one-third part-time for students and faculty; full-time plus one half part-time for staff. CA-CP calculates FTE as full-time plus one-one half part-time for students, faculty and staff

c Total includes Temple University Hospital

d FY 2009 is the first year that Athletics vehicle consumption counted in inventory

e Corrected Values - values updated/corrected in FY2010 Inventory

f Discontinued use of propane in FY2011 and converted system to steam

g Air travel mileage is not representative of all university air travel. Miles reported in the GHG inventory includes travel booked by Temple Campus Travel and does not include travel booked independently through exceptions.

TEMPLE UNIVERSITY FY 2011 Greenhouse Gas Inventory
Greenhouse Gas Emissions Summary FY2006 - FY2011
prepared by the Office of Sustainability

CA-CP v6.7*		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY2011	Difference FY10 to FY11	% Change FY10 to FY11	
Scope 1 Emissions (MT CO ₂ E)	1	Stationary (oil, natural gas, propane)	58,850	56,886	46,749	62,592	56,616	52,097	-4,519	-8.0%
	2	Mobile (University fleet)	615	639	621	890	856	907	50	5.9%
	3	Fugitive (Refrigerants & Cryogenic CO ₂)	1,764	1,702	1,682	2,301	2,295	2,288	-7	-0.3%
	4	Process (Agriculture/Fertilizer)	14	11	13	6	4	6	3	65.8%
	5	Total Gross Emissions Scope 1	61,244	59,237	49,065	65,788	59,771	55,298	-4,473	-7.5%
Scope 2 Emissions (MT CO ₂ E)	6	Purchased Electricity	105,124	100,322	103,758	101,025	103,982	103,937	-45	0.0%
	7	Purchased Steam	287	329	342	372	365	361	-4	-1.0%
	8	Total Gross Emissions Scope 2	105,411	100,651	104,099	101,397	104,346	104,298	-48	0.0%
Scope 3 Emissions (MT CO ₂ E)	9	Faculty/Staff Commuting	11,480	11,405	11,577	11,832	9,404	9,112	-292	-3.1%
	10	Student Commuting	25,692	25,766	26,625	27,749	23,798	24,480	683	2.9%
	11	Air Travel	7,047	7,868	7,950	8,605	9,874	11,399	1,525	15.4%
	12	Solid Waste	5,229	4,981	4,639	3,994	4,211	3,897	-314	-7.4%
	13	Transmission & Distribution Losses	10,412	9,939	10,280	10,011	10,303	10,299	-4	0.0%
	14	Total Gross Emissions Scope 3	59,860	59,960	61,071	62,191	57,590	59,187	1,598	2.8%
Scope 1 - 3 Gross Emissions (MT CO ₂ E)	15	Total Gross Emissions	226,515	219,848	214,235	229,376	221,707	218,783	-2,923	-1.3%
	16	Gross Square Footage (GSF) ¹	8,266,175	8,271,765	8,271,765	9,171,147	9,055,532	9,055,532	0	0.0%
	17	Full-time Equivalent Students (FTE)	27,055	27,560	28,535	29,901	31,363	32,251	888	2.8%
	18	Total Gross Emission Intensity/1000 GSF	27.40	26.58	25.90	25.01	24.48	24.16	-0.32	-1.3%
	19	Total Gross Emission Intensity/FTE	8.37	7.98	7.51	7.67	7.07	6.78	-0.29	-4.0%
Scope 1 - 3 Net Emissions (MT CO ₂ E)	20	Purchased Offsets / Other Offsets	-157	-2,344	-3,484	-5,144	-3,056	-3,668	-612	20.0%
	21	Total Net Emissions	226,358	217,504	210,751	224,232	218,650	215,115	-3,535	-1.6%
	22	Total Net Emission Intensity/1000 GSF	27.38	26.29	25.48	24.45	24.15	23.76	-0.39	-1.6%
	23	Total Net Emission Intensity/FTE	8.37	7.89	7.39	7.50	6.97	6.67	-0.30	-4.3%

Total Gross Emissions Reported to ACUPCC*: 226,219 223,497 218,284 233,138 230,567

* Changes from the FY2006-FY2011 reported inventories:

GHG Emissions for FY2006-FY2009 calculated using CA-CP v6.4

GHG Emissions for FY2010 calculated using CA-CP v6.6 (increase in emission multipliers for electricity and solid waste)

GHG Emissions for FY2011 calculated using CA-CP v6.7 (reduction in emission multiplier for electricity)

TEMPLE UNIVERSITY FY 2011 Greenhouse Gas Inventory

Responsible Parties for Data Collection

prepared by the Office of Sustainability

GHG Scorecard Section	Description	Name	Title	Phone	Email	Notes
1.1	Gross square footage	Tom McCreesh (Brenda Washington)	Director, Planning and Design Facilities Management	215-204-8113	mccreesh@temple.edu	Gross square footage taken from Temple University Fact Book and reflects square footage of buildings in which Temple University has operational control. Tom McCreesh reported no change from FY10 to FY11. File: BuildingGrossSF_Oct2011.xls
1.2	Full-time equivalent students	John Moore	Director Institutional Research	215-204-5005	jmooreii@temple.edu	Student population information received by email from John Moore to Katherine Switala Elmhurst on 9/14/11. Faculty data obtained from the Fall 2010 Student Profile. Staff data received from Rich Hetherington in HR on 11/24/2010. File: Temple Population_FY2011.xls
1.3	Operating budget		Office of Management and Budget			Information obtained from the Office of Management and Budget website: www.temple.edu/budget (FY11 Budget Package - Total Revenue line item) File: FY2011_Temple Budget.pdf
1.4	Research budget (expenditures)	Robert O'Malley	ERA Project Manager Office of Research Administration	215-204-4345	omalley@temple.edu	Information received by email from Robert W. O'Malley to Katherine Switala Elmhurst on 12/21/11. File: Research Expenditures_DirectIndirectsFY2011.xls
1.5	Energy expenses	Kurt Bresser	Energy Manager Facilities Management	215-204-4515	kurt.bresser@temple.edu	Information received by email from Kurt Bresser to Katherine Switala Elmhurst on 2/21/12. File: FY2011 Energy Expenses.pdf
1.6	Research building space gross square footage	Kurt Pflugfelder	Space Management Coordinator Scheduling and Space Management	215-204-6122	kurt.pflugfelder@temple.edu	Information received by email from Kurt Pflugfelder to Katherine Switala Elmhurst on 9/8/11 File: Temple University FY2011 Laboratory Room Records.xls
1.7-1.11	Students, faculty, staff populations	John Moore Richard Hetherington	Director Institutional Research Human Resources	215-204-5005 215-926-2235	jmooreii@temple.edu richard.hetherington@temple.edu	Student information received by email from John Moore to Katherine Switala Elmhurst on 9/14/11. Faculty information obtained from the Fall 2010 Student Profile from Institutional Research website. Staff information obtained from Richard Hetherington in Human Resources. File: Temple Population_FY2011.xls
2.1	Stationary sources	Kurt Bresser	Energy Manager Facilities Management	215-204-4515	kurt.bresser@temple.edu	Information received by email from Kurt Bresser to Sandy McDade on 1/27/12. File: FY11 Gas Oil and Elec for GHG Inventory.xlsx
2.2	Mobile sources (OFM)	Mark H. Gottlieb	Superintendent of Service Operations Facilities Management	215-204-9627	mark.gottlieb@temple.edu	Information received by email from Mark Gottlieb to Katherine Switala Elmhurst on 9/9/11 File: OFM Fuel_FY2011 data.pdf File: FuelConsumption_FY2011Combined.xlsx
2.2	Mobile sources (Campus Security)	Janice Dietz	Executive Assistant Campus Safety Services	215-204-7900	janice.dietz@temple.edu	Information received by email from Janice Dietz to Katherine Switala Elmhurst on 11/29/11 File: Campus Security Vehicle Consumption_FY2011.pdf File: FuelConsumption_FY2011Combined.xlsx

TEMPLE UNIVERSITY FY 2011 Greenhouse Gas Inventory

Responsible Parties for Data Collection

prepared by the Office of Sustainability

GHG Scorecard Section	Description	Name	Title	Phone	Email	Notes
2.2	Mobile sources (Health Sciences Center)	James DeNofa	Engineering Supervisor Facilities Management - HSC	215-707-4796	james.denofa@temple.edu	Information received by email from James DeNofa to Katherine Switala Elmhurst on 10/11/11 File: HSC MASTER FUEL Consumption_FY2011.xls File: FuelConsumption_FY2011Combined.xlsx
2.2	Mobile sources (Residence Halls)	Rafael de Luna III	Assistant Director - Facilities Office of University Housing	215-204-9630	rdeluna@temple.edu	Information received by email from Rafael de Luna to Katherine Switala Elmhurst on 9/29/11 File: ResHall_FuelReport_FY2011.doc File: FuelConsumption_FY2011Combined.xlsx
2.2	Mobile sources (Athletics)	Tim Thiess	Athletic Business Manager Athletics Business and Administration	215-204-2489	tthiess@temple.edu	Information received by email from Tim Thiess to Katherine Switala Elmhurst on 9/20/11. (An estimate of actual mileage was reported - an estimated average of 22MPG was assumed) File: Athletics Vehicle Summary Mileage FY11.xls File: FuelConsumption_FY2011Combined.xlsx
2.3	Process sources (Cryogenic CO2)	Kurt Bresser	Energy Manager Facilities Management	215-204-4515	kurt.bresser@temple.edu	Information received from Kurt Bresser to Katherine Switala Elmhurst on 2/6/12 File: 12192011 Fiscal Year Dry Ice Purchases by account number.xlsx
2.4	Fugitive sources (Refrigerants)	Kurt Bresser	Energy Manager Facilities Management	215-204-4515	kurt.bresser@temple.edu	Information received from Kurt Bresser to Katherine Switala Elmhurst on 2/6/12. Number remains unchanged from FY2010 to FY2011 File: 2011 GHG_Steam Propane.pdf
2.5	Agriculture	Craig Roncace	Supervisor Facilities Management	215-204-1303	craig.roncace@temple.edu	File: 12192011 Fiscal Year Dry Ice Purchases by account number.xlsx
3.1	Purchased electricity	Kurt Bresser	Energy Manager Facilities Management	215-204-4515	kurt.bresser@temple.edu	Information received by email from Kurt Bresser to Sandy McDade on 1/27/12. File: FY11 Gas Oil and Elec for GHG Inventory.xlsx
3.2	Purchased renewable energy (credits; offsets)	Kurt Bresser	Energy Manager Facilities Management	215-204-4515	kurt.bresser@temple.edu	There are no credits for the FY 2011 inventory - RECs contract expired in June 2008
3.3	Purchased steam	Kurt Bresser	Energy Manager Facilities Management	215-204-4515	kurt.bresser@temple.edu	Information received from Kurt Bresser to Katherine Switala Elmhurst on 2/6/12. File: 2011 GHG_Steam Propane.pdf
4.1	Commuting	NA - used results from 2010 Temple Transportation Survey				

TEMPLE UNIVERSITY FY 2011 Greenhouse Gas Inventory
Responsible Parties for Data Collection
prepared by the Office of Sustainability

GHG Scorecard Section	Description	Name	Title	Phone	Email	Notes
4.2	Air travel	Ramona Richardson	Administrative Specialist Office of Management Analysis	215-204-5144	ramona.richardson@temple.edu	Information received by email from Ramona Richardson to Katherine Switala Elmhurst on 9/9/11 File: Airline Travel_FY2011.pdf
4.3.1	Solid waste* (Main, Ambler, HSC)	Mark H. Gottlieb	Superintendent of Service Operations Facilities Management	215-204-9627	mark.gottlieb@temple.edu	Information received by email from Mark Gottlieb to Katherine Switala Elmhurst on 9/9/11 File: Waste_Ambler HSC Main Tyler_FY2011 data.pdf File: TrashTonnageCombined_FY2011.xlsx
4.3.1	Solid waste* (Residence Halls)	Rafael de Luna III	Assistant Director - Facilities Office of University Housing	215-204-9630	rdeluna@temple.edu	Information received by email from Rafael de Luna to Katherine Switala Elmhurst on 9/29/11 File: TempleHousing FY2010_Waste_28SEPT11.xls File: TrashTonnageCombined_FY2011.xlsx
4.3.1	Solid waste* (College of Podiatric Medicine)	Anthony Morris	Area Manager Facilities Management - Podiatric	215-625-5240	amorris@tuspm.temple.edu	Information received by email from Anthony Morris to Sandy McDade on 1/31/11 File: Podiatry Waste_FY2011.pdf File: TrashTonnageCombined_FY2011.xlsx
4.3.1	Solid waste* (Gittis Student Center)	David Broadus (Jason Levy)	Director Finance and Administration Division of Student Affairs	215-204-6556	broadusd@temple.edu (jason.levy@temple.edu)	Information received by email from Sharon Torres, Assistant Director of the Howard Gittis Student Center, to Sandy McDade on 12/6/11 File: Gittis Waste removal FY2011.xlsx File: TrashTonnageCombined_FY2011.xlsx
4.3.1	Solid waste* (Liacouras Center)	Craig Jankowski	Operations Manager Liacouras Center	215-204-2400	cjankowski@liacourascenter.com	Information received by email from Craig Jankowski to Katherine Switala Elmhurst on 1/31/11 (totals are for calendar year 2010) File: Liacouras TrashRecycling_FY2011.xls File: TrashTonnageCombined_FY2011.xlsx
4.3.2	Incinerated solid waste	David McDonough	Hazardous Waste Manager Environmental Health & Radiation Safety	215-707-0109	david.mcdonough@temple.edu	Information received by email from David McDonough to Katherine Switala Elmhurst on 9/13/11 File: Incinerated waste_FY11 data.pdf
	Offsets (Composting)	Marshall Budin	Sr. Facilities Specialist	215-204-8460	marshall.budin@temple.edu	Information received by email from Marshall Budin to Katherine Switala Elmhurst on 11/16/2011 from annual recycling report File: TUOS Tonnage Report FY10-11.xlsx
	Offsets (Computer Recycling)	Jonathan Latko	Temple Computer Recycling Center	215-204-4749	latko@temple.edu	Information received by email from Jonathan Latko to Katherine Switala Elmhurst on 9/20/11. Data converted to offsets using Temple Computer Recycling calc FY2011.xls developed by O'Brien and Gere. File: CRC TotalCollectionData_FY2011.xls
	Offsets (Construction Recycling)	Tom McCreesh	Director, Planning and Design Facilities Management	215-204-8113	mccreesh@temple.edu	Information received by email from Tom McCreesh to Katherine Switala Elmhurst on 9/7/11. Construction waste recycling was reported for Pearson McGongile in FY2011. File: WARM_Construction_FY2011.xls

* Solid waste data compiled together into FY2011 Recycling and Trash Report (Trash & Recycling Data All Campuses FY2011_FINAL_30Jan2012)