# University of North Texas
# Greenhouse Gas Emissions Inventory
# FY 2012

## What is a Greenhouse Gas Emissions Inventory?

UNT Sustainability has released a Greenhouse Gas Emissions Inventory in 2007, 2009, and 2011.

A Greenhouse Gas Emissions (GHG) inventory is a quantitative, one-year assessment of the impact of maintaining an institution's infrastructure, operational behaviors and individual behaviors.

The GHG Emissions inventory helps identify and improve practices at an institution for energy savings, campus health and wellness and overall social, economic and environmental sustainability.

UNT is required to complete a GHG inventory as a signatory of the American College and University President's Climate Commitment (ACUPCC).

## GHG Emissions Inventory Data Collection

Data points collected from campus are categorized into three different scopes.

1 2 3

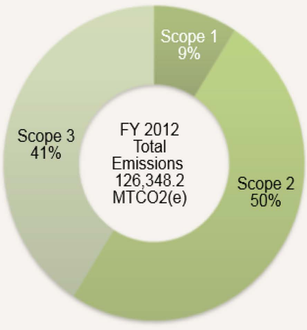
The greenhouse gases are then converted into carbon equivalents ($CO_2e$) using their respective global warming potentials.

Once the data is collected, it is put into a calculator that converts it into its associated greenhouse gases.

This conversion allows the university to track its multiple greenhouse gas emissions in one form.

$CO_2$

## GHG Emissions Inventory Scope Breakdown




## Scope 1

Scope 1 emissions are the direct result of the practices and the infrastructure of the university.

## Scope 2

Scope 2 emissions are considered to be outside of the direct control of the university, but are still heavily influenced by the university.

## Scope 3

Scope 3 emissions are not under the control of the university, but are the results of the services that the institution provides.

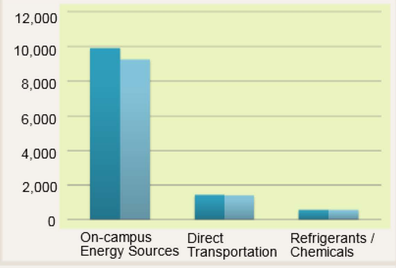
## Scope 1 - University Controlled Sources

Scope 1 emissions are direct results of the university's practice and infrastructure, which include:

- Natural gas and propane burned on campus
- Refrigerants and chemicals released into the atmosphere
- Emissions resulting from the use of fertilizers
- Unleaded fuel and diesel fuel consumed by UNT Fleet Vehicles

## Scope 1 Comparison

Measured in MT $CO_2e$




## Measuring Progress

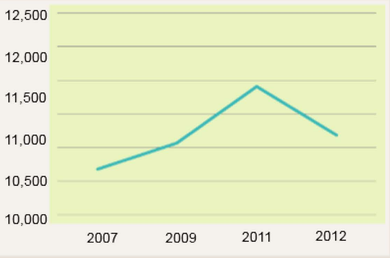
UNT Facilities reduced synthetic fertilizer use by 5,207 pounds.

The UNT Fleet reduced diesel fuel use by 10,663 gallons.

**In FY 2012, UNT reduced emissions in Scope 1 by 729.4 MT $CO_2e$.**

## Scope 1 Change

Measured in MT $CO_2e$




## Reducing Emissions

UNT has been recognized as a Tree Campus USA University for the fifth consecutive year and undertakes tree plantings annually.

In 2007, the Facilities' Automotive Department received an award from the Clean Cities Coalition. The UNT Fleet has almost 100 electric or alternatively fueled vehicles.

## Scope 2 - Energy Consumption

Scope 2 emissions for UNT are comprised solely of the emissions resulting from the electricity purchased from Denton Municipal Electric.

UNT's total electricity consumption comes from both the infrastructure of the university and the behavior of the students, faculty and staff.

## Reducing Emissions

Significant reductions in the utility usage of the university signal that our LEED buildings and the energy performance contract with Schneider Electric are having a positive effect at UNT, bringing the university closer to our stated goal of carbon neutrality by 2040.

Three community-size wind turbines by Apogee Stadium contribute to the Eagle Point grid that houses the stadium, Mean Green Village, and Victory Hall residence hall.

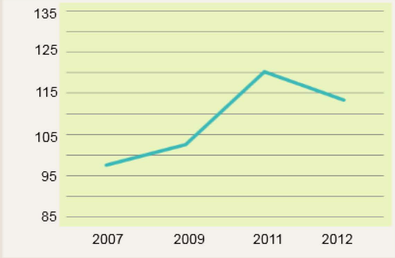
UNT entered into a performance contract with Schneider Electric called S.M.A.R.T. (Save/Measure/Achieve/Reduce/Track) to increase energy efficiency and water conservation efforts on campus.

## Measuring Progress

Purchasing less kilowatts per hour was a large part of the overall reduction in emissions at UNT.

## Purchased kWh

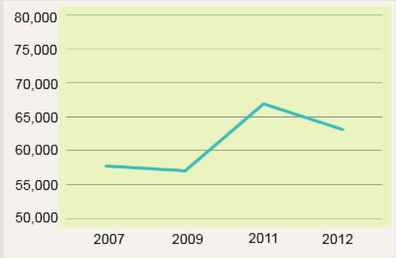
Measured by millons




**In FY 2012, UNT consumed 6,755,150 less kWh than in FY 2011.**

## Scope 2 Change

Measured in MT $CO_2e$




## Scope 3 - Indirect Emissions

Scope 3 emissions are the emissions sources which can be most easily related to individual behaviors across campus, which include:

- Solid waste
- Paper consumption
- Student, faculty and staff commuting
- University funded travel

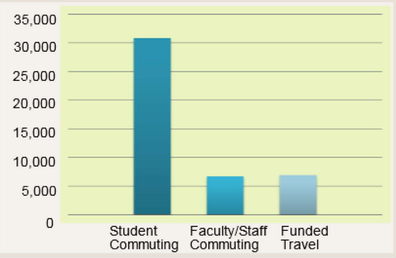
## Funded Travel

UNT funded travel consists of air travel and ground travel to university-related conferences and events.

Study abroad miles are also part of the calculations that are taken into account for travel.

## Scope 3

Measured in MT $CO_2e$




## Reducing Emissions

### Trash Study

UNT Sustainability developed a baseline in FY 2012 that captures a more accurate estimate of the solid waste generated on campus from average dumpster weights collected by a team of students.

### Transportation Survey

UNT Sustainability hosts a campus-wide Transportation Survey to generate data for the GHG inventory, which includes commuting habits of the campus community.

### Recycling

UNT participates in RecycleMania, a recycling contest for universities in the U.S. and Recycling at Tailgating, in which students volunteer to help facilitate recycling at football games.

### Office Certification Program

The OCP focuses on improving the individual actions and behaviors of the UNT community that are part of reducing emissions at UNT.

## Measuring Progress

UNT used 247,600 less sheets of paper and 8,879,766 less gallons of water.

**In FY 2012, the rise in Scope 3 emissions is due in large part to an increase in funded air travel.**

## Scope 3 Change

Measured in MT $CO_2e$


A green light to greatness.

UNT