

Gases that trap heat in the atmosphere are referred to as Greenhouse Gases and are typically carbon dioxide, methane, nitrous oxide, and halogenated gases according to the Environmental Protection Agency (EPA). These gases are the by-products of fossil fuel combustion and agricultural and industrial activities.

EPA assigns a Global Warming Potential (GWP) to each gas relative to carbon dioxide (GWP = 1) to define its heat trapping capability. Values for the gases are: methane 36; nitrous oxide 298; and halogenated gases in a range from thousands to tens of thousands.

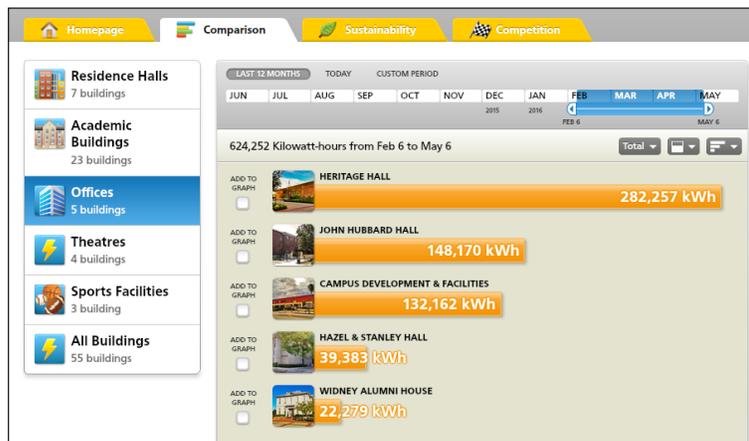
What are the GHG sources at USC?

As of 2012, 54% of USC's greenhouse gases came from purchased electricity, 15% from natural gas, 12% from financed air travel, 7% from solid waste, and 7% from commuting.

What is USC doing to curtail GHG emissions?

Renewable Energy (solar, wind, biomass, and hydroelectric). USC's Renewable Energy Portfolio Standard (REPS) is directly linked to the Los Angeles Department of Water and Power (LADWP) and is at sixteen (16) percent. Percentages will increase as LADWP increases its REPS.

Underground Cooling Loop. Chillers atop several UPC buildings operate off peak hours to refrigerate water circulated from the thermal reservoir (approx. one million gallons) beneath Cromwell field. During the day, chilled water is then re-circulated back to UPC buildings for air conditioning. This reduces fossil fuel consumption and lowers utility bills appreciably.



USC Five Office Building Electricity Dashboard for Feb - Apr 2016

What I can do...

- ✓ Reduce my energy/utility usage.
- ✓ Set the thermostat higher to limit the amount of heating or cooling I use at my home or office.
- ✓ Carpool or take public transportation to commute to and from work.
- ✓ Conserve fuel by minimizing use of vehicles on weekends.

Waste Diversion. USC-vendor Athens Services currently reclaims twenty-three (23) percent of recyclable materials from campus waste that would be headed to landfills and/or incinerators. The Sustainability Office also encourages tailgaters to compost and recycle during game days.

What's the next step forward?

A concerted effort to reduce fossil fuel use individually and organizationally, locally and globally will have a significant impact on GHG emissions. Furthermore, USC can take steps together with LADWP to raise REPS percentages and thus, aggressively lower GHGs.

References

USC Building Electricity and Greenhouse Gas Dashboards
<http://green.usc.edu/content/building-electricity-and-greenhouse-gas-dashboards>

University GHG Emissions: 2001 - 2009 Report
<http://green.usc.edu/content/university-greenhouse-gas-emissions-2001-2009-report>

EPA Climate Change and Greenhouse Gas Emissions
<https://www3.epa.gov/climatechange/>
<https://www3.epa.gov/climatechange/ghgemissions/>