Building a Carbon Action Plan For Emory
Climate Change—Causes

- Driven by an increase in heat-trapping gases in the atmosphere, principally carbon dioxide
- Largely due to human activities, especially the burning of fossil fuels and deforestation
- CO2 levels in the atmosphere:
  - about 275 ppm during the Pre-Industrial Period
  - about 390 ppm today
Climate Change—Impacts

- Rise in average temperatures (4-5°C predicted by end of Century)
- Less rain in dry and semi-dry areas
- Rise in sea level (1m or more predicted by end of century)
- More extreme weather events (heat waves, droughts, hurricanes, floods...)
- Spread of deserts, flooding of coastal areas and river basins, major loss of plant and animal life
- Negative health effects (e.g., spread of disease, illness linked to water and air pollution)
- Food and freshwater shortages
- Loss of livelihood (small farmers, herders, and fishers)
Carbon Reduction Goals

• Target: 350 ppm. Concentrations of CO2 in the atmosphere below 350 ppm may avoid the most dangerous effects of climate change (Intergovernmental Panel on Climate Change 4th Assessment Report, 2007)

• To achieve 350 ppm by 2050, global carbon emissions must be reduced 85% from 2000 levels (IPCC, 2007)

• Schools around the US have adopted different emissions goals:
  • Baseline year
  • Target year
  • Total or per square foot goal
  • Scopes of emissions included
  • Inclusion of healthcare activities

• Emory will develop a carbon goal to fit our institutional values
Climate Change

The US is a major emitter of greenhouse gases (currently and historically) and therefore has a special obligation to act.

Emory has the potential to be a leading US university in addressing its carbon impacts.
Emory’s CO₂e Emissions

Scope 1:
Direct Transportation (Clifton Shuttles, Campus Fleet), Other On-Campus Sources (Boilers, Generators), Refrigerants & Chemicals, Fertilizer

Scope 2:
Purchased Electricity

Scope 3:
Faculty/Staff Commuting, Student Commuting, Emory Funded Air Travel, Study Abroad Air Travel, Landfill Waste, Power Transmission & Distribution Losses
Emory’s CO$_2$e Emissions

- Purchased Electricity: 64%
- Faculty / Staff Commuting: 18%
- Direct Transportation: 1%
- Directly Financed Air Travel: 7%
- Study Abroad Air Travel: 2%
- Power T&D Losses: 6%
- Refrigerants & Chemicals: 1%
- Student Commuting: 1%
Carbon Action Areas for Emory

- Reduce internal and international flights by faculty and students
- Increase efficiency of all cars
- Cut miles travelled by cars through encouraging car-sharing and other methods
- Reduce emissions from buildings
- Address the carbon impact of our supply chain
- Invest in renewable energy (solar, biofuels, geothermal)
- Encourage energy-saving behaviors
- Preserve and expand Emory’s forests and expand composting
- Encourage diversified energy supply
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www.sustainability.emory.edu