Duke's GHG Emissions: 2023 Update
Overview

● Overview of Duke’s 2024 Goal
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● FY23 GHG Update

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2024 Carbon Neutrality Goal
History of Sustainability

2003 - adopted LEED policy
2004 - hired first sustainability staff
2005 - signed the Environmental Policy
2007 - signed the ACUPCC commitment
2009 - adopted Climate Action Plan
2011 - developed Sustainability Strategic Plan
2019 - finalized Climate Action Plan update
2021 - convened a Board of Trustee Task Force on Climate Change and Sustainability
2022 - Duke Climate Commitment
2023 - Creation of Office of Climate and Sustainability
Geographic Boundary

Important Notes:

- Duke’s geographic boundary is based on an operational-control methodology (see GHG Protocol). It currently includes University-owned buildings in Durham and Beaufort.
Emissions Boundary

**Important Notes:**
- Duke includes more emission categories in its neutrality goal compared to large majority of peer schools.
- Fugitive emissions and transmission losses added in FY17 to more fully account for energy impact.
FY23 GHG Emissions Update
Duke’s FY23 GHG emissions represent a 38% reduction from the 2007 baseline year (compared to only 20% reduction in FY19). Overall GHG emissions rose 8% compared to last year, largely due to a sharp increase in air travel emissions which were nearly 2.5x last year’s. Energy emissions have slightly decreased and employee commuting emissions have remained relatively stable.
Duke’s emissions don’t happen in a vacuum, they’re a byproduct of a vibrant, growing campus. Campus has grown by 27% (in terms of built square footage) since 2007, and the student, faculty, and staff population has grown by 24%.

Both of these factors have a tremendous impact on Duke’s emissions. The university has achieved its emission reductions in spite of consistent growth.
Energy-related emissions at Duke have decreased by 41% since 2007 despite campus growth of over 3 million square feet of new building space. This is due to the following initiatives:

- Discontinuing use of coal on campus
- Increased building and plant efficiency
- Duke Energy reducing emissions intensity of its electricity plants

Continued energy reductions are expected via future lighting retrofits, building renewals, and steam-to-hot-water conversions.
COVID-19 caused transportation emissions to decrease significantly, however while commuting seems to have leveled off, air travel is rebounding to pre-pandemic levels. However, compared to 2007 there is a:

- 40% decrease in commuting emissions
- 20% decrease in air travel emissions
- 1% decrease in fleet emissions

Flexible work arrangements have likely prevented commuting emissions from fully rebounding, and Sustainable Duke is exploring strategies to better manage air travel emissions.
*Other emissions include emissions from fleet, waste, refrigerants, and fertilizers.
Looking Forward
Looking Forward on Emissions

- Duke will meet the 2024 goal with a combination of emissions reductions and carbon offset retirement
- In the coming year, Duke will be assessing emissions beyond 2024 to identify even greater internal campus reductions and significantly reduce the need for carbon offsets