

WARREN WILSON COLLEGE

ANNUAL GREENHOUSE GAS EMISSIONS INVENTORY REPORT

2013-2014



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WWC Campus Sustainability Crew

Warren Wilson College Mission Statement

The mission of Warren Wilson College is to provide a distinctive undergraduate and graduate liberal arts education. Our undergraduate education combines academics, work, and service in a learning community committed to environmental responsibility, cross-cultural understanding, and the common good.

Purpose of this Inventory

In 2009, acting upon our mission driven values of environmental responsibility and commitment to the common good, the College committed to reduce greenhouse gas emissions 80% below 2007 levels by 2020. Our commitment was made public by being a signatory of the American College and University Presidents Climate Commitment and publishing the WWC Climate Action Plan, which was written by a committee of WWC faculty, staff and students, and received the national 2010 Climate Leadership Award from Second Nature and the ACUPCC.

In support of the WWC Climate Action Plan, the WWC Environmental Leadership Center's Campus Sustainability Crew tracks all campus emissions annually—building energy use, agriculture operations, waste stream, transportation, paper use, and much more. This data has been compiled since 2004 and is stored in the Campus Carbon Calculator. Emissions include carbon dioxide, nitrous oxide, methane and hydrofluorocarbons. These different gasses are all combined into one weighted measurement known as CO₂ equivalent (ECO₂).

This inventory report seeks to highlight emissions data related to electricity, natural gas and petroleum use, communicate our progress towards our Climate Action Plan goals, and stimulate dialog about our challenges ahead.

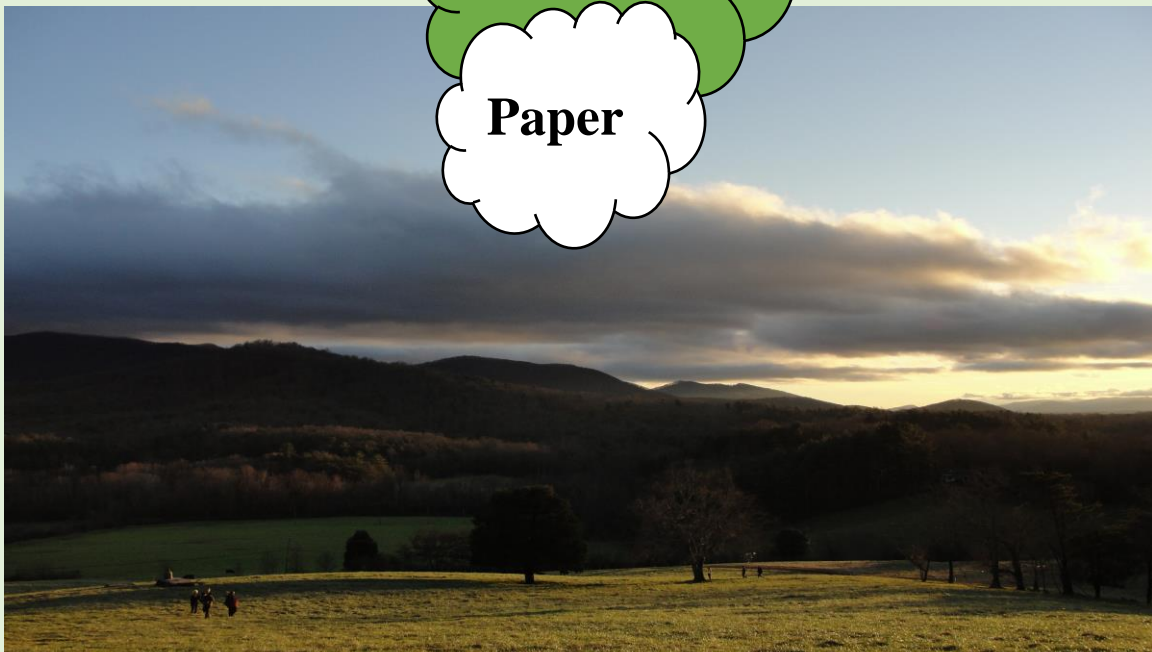
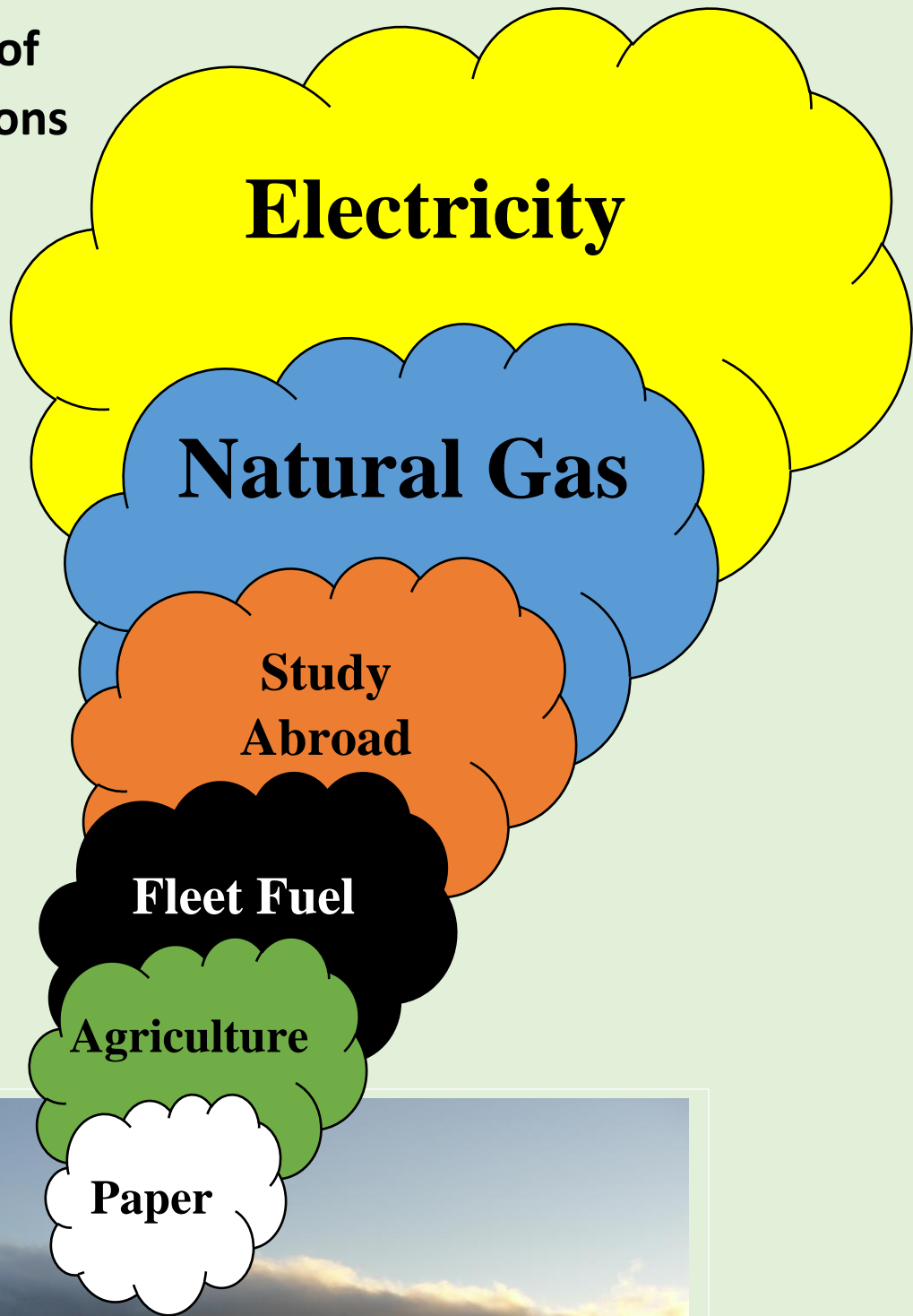
Major Sources of Campus Emissions

Key:

A cloud this size



represents 1
metric ton of CO₂ gas.



This spike in emissions was due to 3 refrigerant leaks from the pool dehumidifier that released potent hydrofluorocarbons.

Total campus emissions have changed less than 1% since 2008.

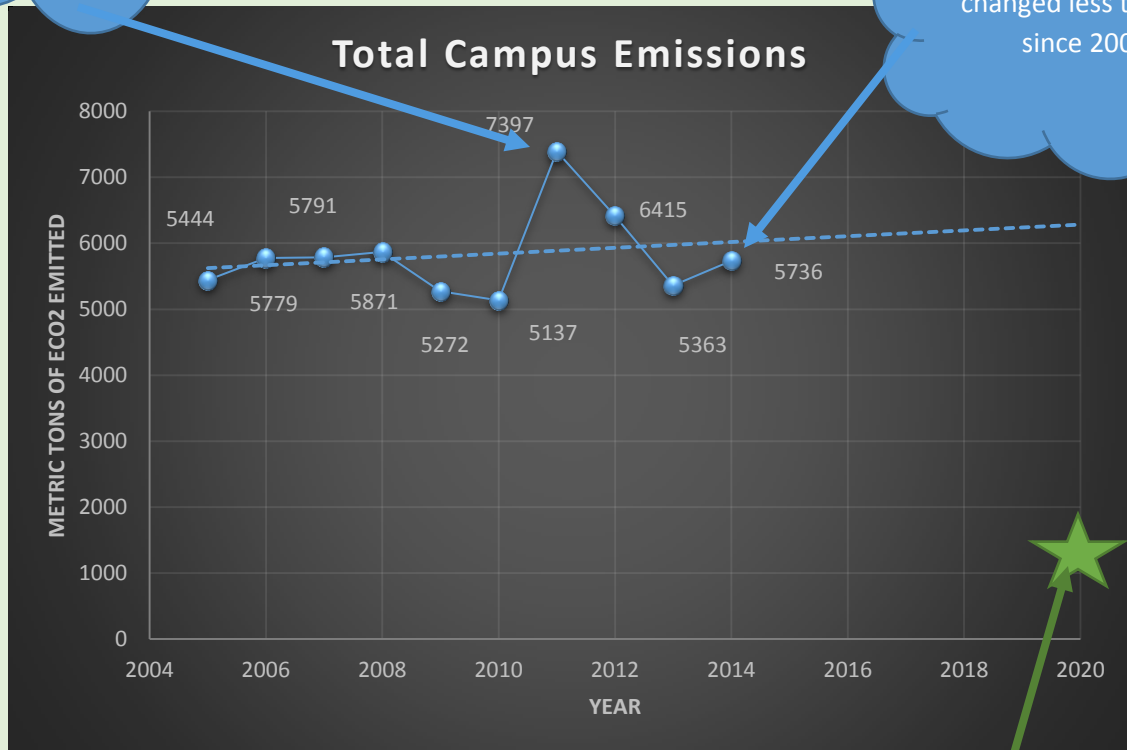


Figure 1.1 Total emissions for Warren Wilson College in Metric Tons CO₂ equivalent.

Meeting our Climate Action Plan goals would save approximately \$500,000 annually in energy expenses; money we could put towards other campus needs.

After progress for years, electricity emissions rose in 2013 and 2014 to where they were in 2008.

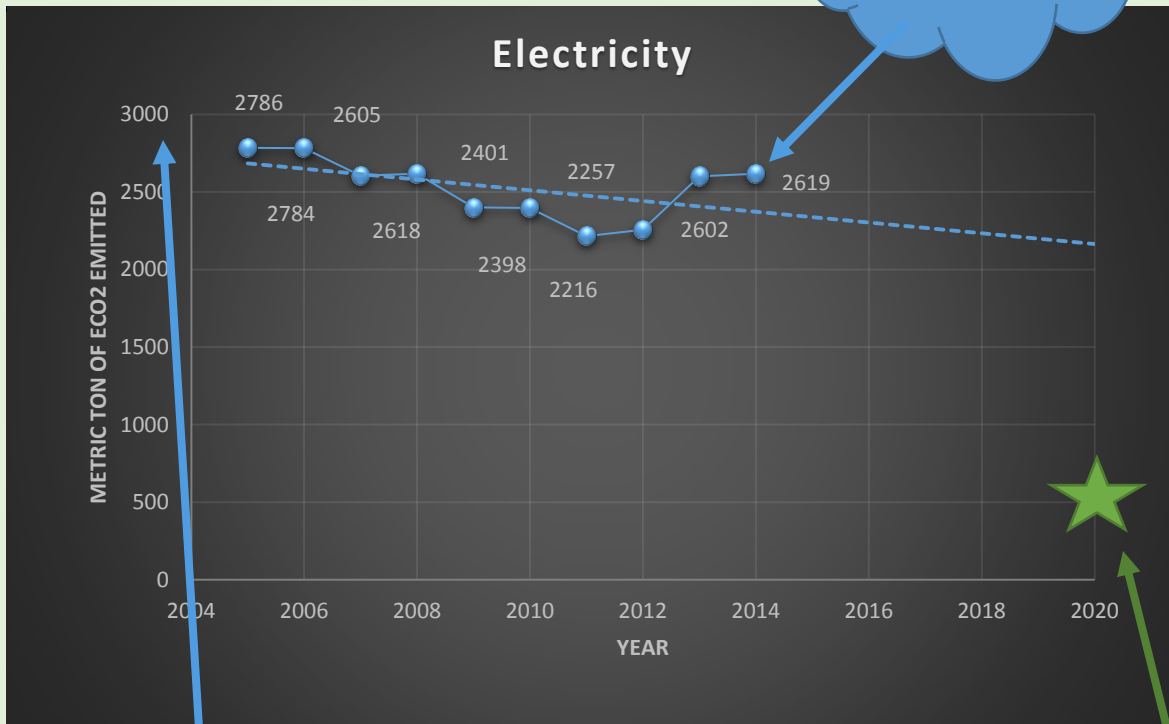
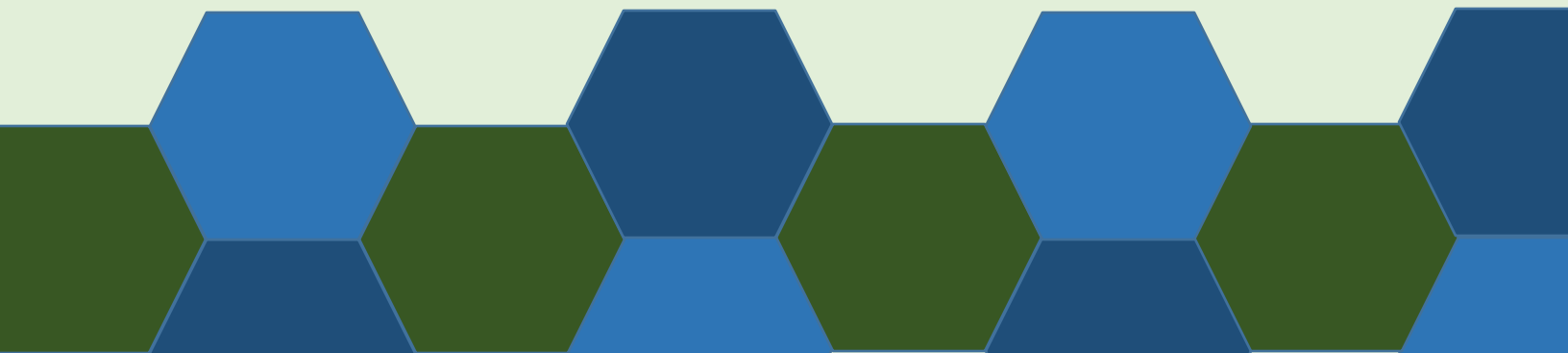


Figure 2.1 Electricity emissions by Warren Wilson College since 2005.

Electricity use is by far our single largest source of emissions. Campus electricity is generated primarily at the Lake Julian coal fired power plant. Visit ilovemountains.org to see where in Central Appalachia the coal that powers WWC is mined.

Meeting our electricity emission goals would save upwards of \$250,000 annually.



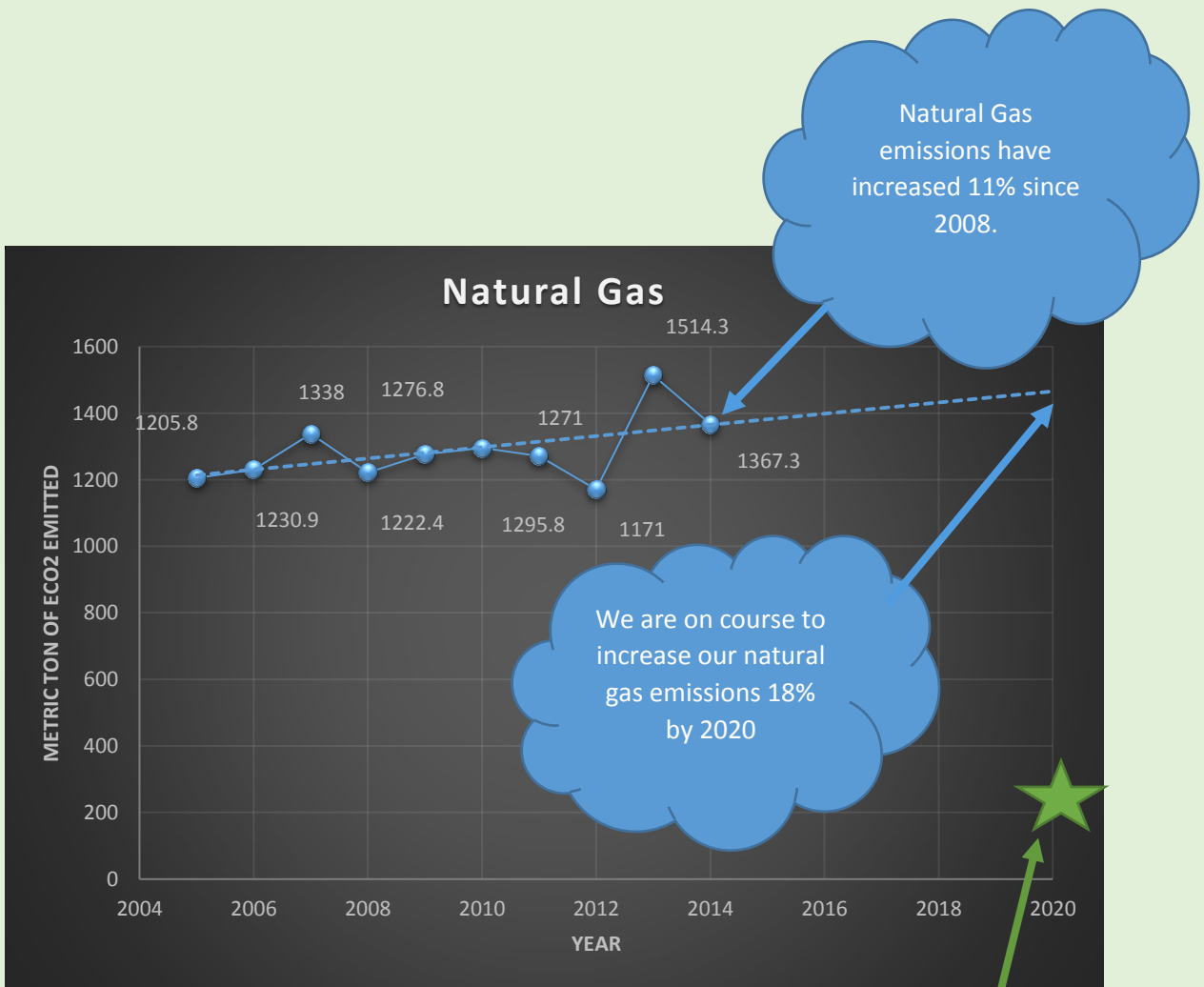
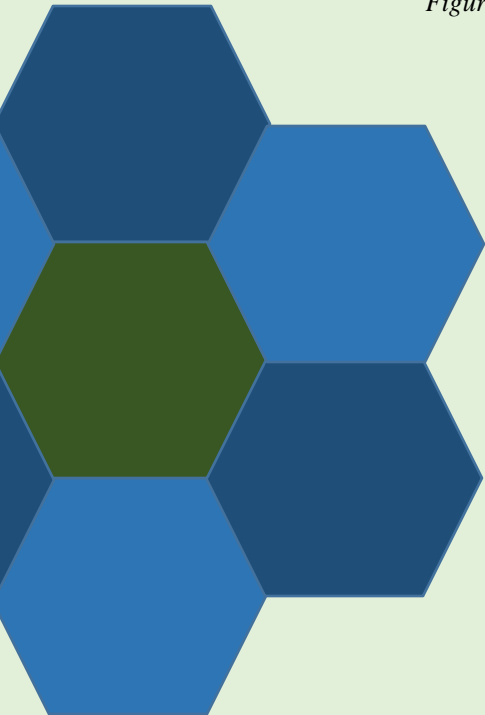


Figure 3.1 Natural Gas emissions by Warren Wilson College since 2005.

Meeting our natural gas emission goals would save upwards of \$140,000 annually.



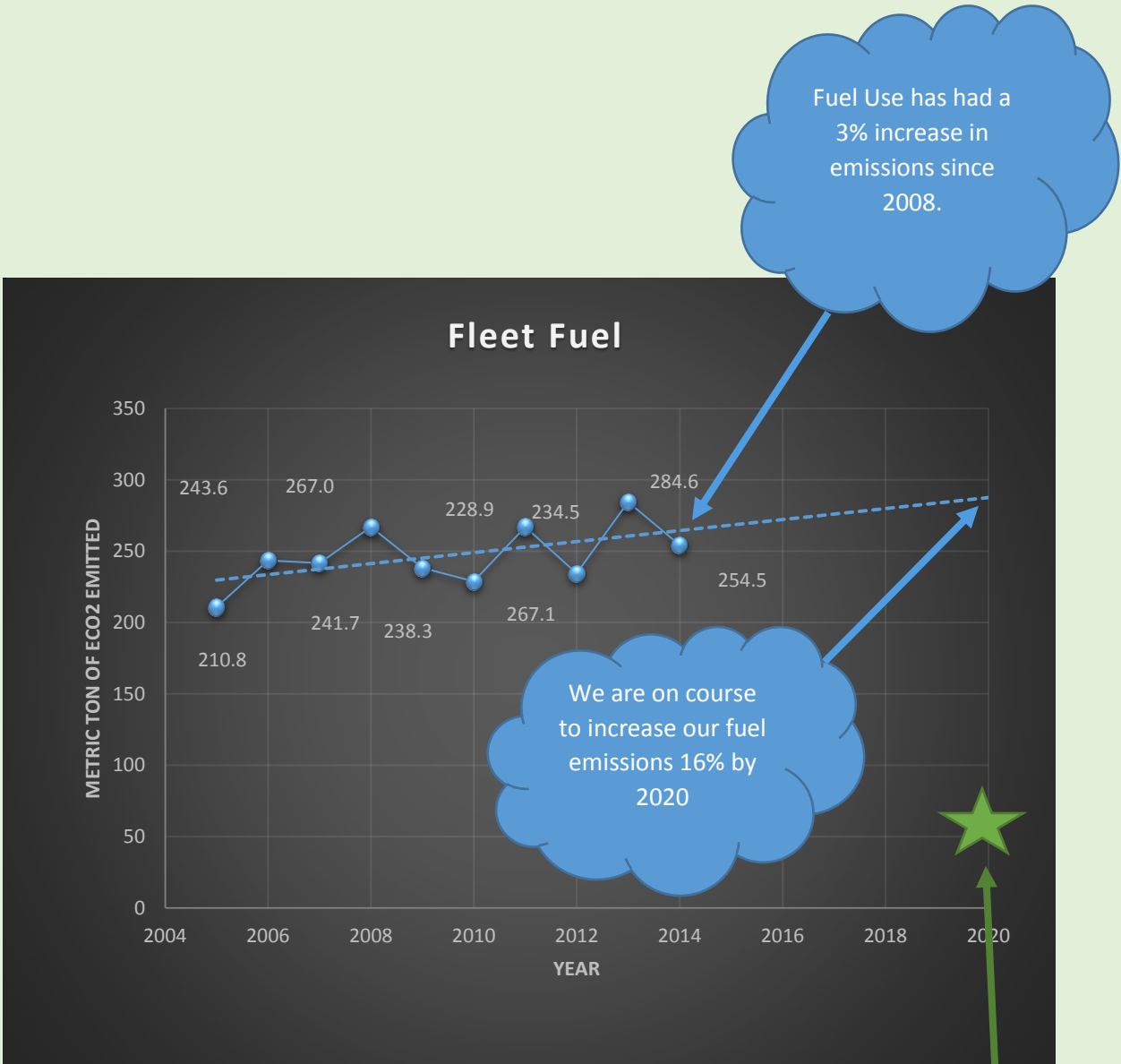
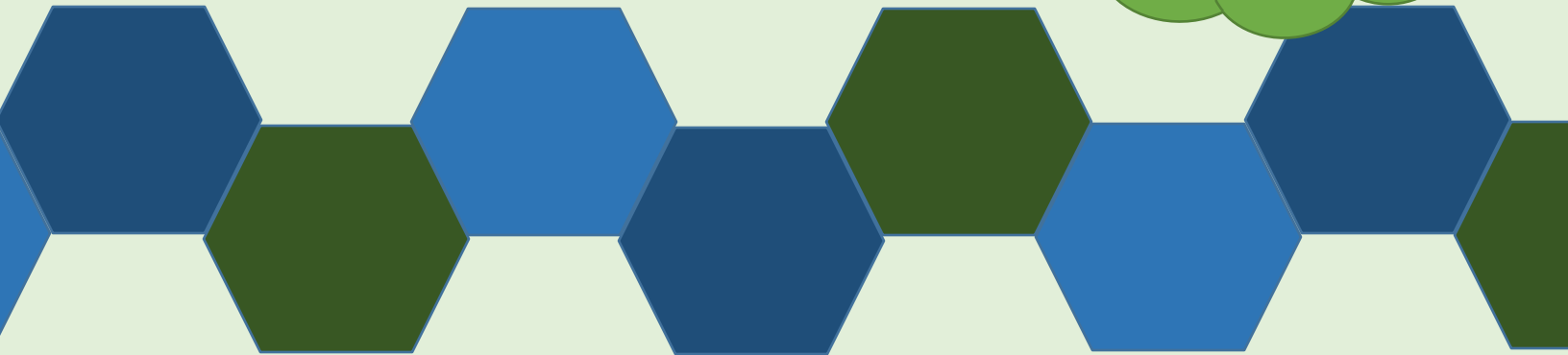


Figure 4.1 Fleet fuel emissions by Warren Wilson College since 2005.

Meeting our fuel emission goals would save upwards of \$100,000 annually



Other Greenhouse Gas Emissions

Electricity and natural gas use are Warren Wilson's largest greenhouse gas emitters. Fleet fuel and International Programs compete for the number 3 spot depending on the number of students who study abroad in a given year (because cross cultural understanding is part of our mission and studying abroad is the main way we achieve it, international travel is not part of our Climate Action Plan reduction goals at this time, though the International Programs Office encourages students to offset airline emissions). In 2014 electricity, natural gas and fleet fuel sources accounted for 74% of total emissions at 4,240 metric tons of CO₂ equivalent. Remaining sources (paper use, international travel, waste stream, agriculture, propane mowers, black smith forge, carpooling, etc.) produced 26% of campus emissions at 1,496 metric tons of CO₂ equivalent.

Looking Ahead

Warren Wilson College has a long way to go reducing our greenhouse gas emissions, and you can help. Go to the Green Living Guide to learn ways to reduce your personal footprint: <http://www.warren-wilson.edu/sustainability/green-living>. Meeting our campus Climate Action Plan reduction goals will, however, require instructional change that addresses the needs to conserve energy, improve building performance, increase fleet efficiency, and generate more on-campus renewable energy. Do what you can do to be part of the solution, and help hold the College accountable to our commitment to reduce campus greenhouse gas emissions 80% by 2020. Climate activist and author Bill McKibben believes, *"In a world that desperately needs to figure out how to sustain itself, Warren Wilson has figured out how to offer both the knowledge and the hands-on experience that may give us a fighting chance. In an abstracted world, its focused on the immediate and the real; in a distracted world, it's focused on the desperately urgent."* We can rise to the challenge.