



# NC GreenPower – Carbon Offset Fact Sheet

## Frequently Asked Questions

### What is a carbon offset?

Carbon offsetting is the act of mitigating (“offsetting”) greenhouse gas emissions. An example is the purchase of carbon offsets to compensate for the greenhouse gas emissions caused by human activity such as driving, air travel and industrial processes. Source: [en.wikipedia.org/wiki/carbon\\_offset](http://en.wikipedia.org/wiki/carbon_offset)

### What are greenhouse gases and how are they created?

Greenhouse gases are gases that trap heat in the atmosphere. They are created naturally and from human activity. Types of greenhouse gases include: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and fluorinated gases.

### Why is the mitigation of greenhouse gases important?

According to the Sixth US Climate Action Report in 2014, greenhouse gas levels are falling, but more reductions are still needed to positively impact the environment. Greenhouse gas emissions in 2017 (after accounting for sequestration from the land sector) were 13% below 2005 levels. Source: U.S. EPA’s inventory of U.S. Greenhouse Gas Emissions and Sinks.

Between 1990 and 2007:

- Carbon Dioxide increased 20.2%
- Methane reduced 5.2%
- Nitrous oxide reduced 1%

### Why are greenhouse gases harmful?

Global warming, changes in climate, ozone depletion, sea level rise, and biodiversity are all affected directly or indirectly by harmful greenhouse gases. A number of human activities, processes and consumptions produce waste gases that are harmful to the environment. Sources: U.S. Energy Intelligence Agency, International Energy Agency, Intergovernmental Panel on Climate Change.

Methane is the second biggest contributing greenhouse gas, and is responsible for 20% of the enhanced (human caused) greenhouse effect. It is about 23 times more powerful a greenhouse gas than carbon dioxide, and has an atmospheric lifetime of roughly 12 years.

### What does mitigating 1,000 pounds of carbon dioxide or carbon dioxide equivalent accomplish?

The average driver puts 15,000 miles on their vehicle per year. For a mid-sized car, that equates to emitting about 11,000 pounds of carbon dioxide. Larger vehicles release about 20,000 pounds – nearly double that amount. Over a year, just one block (\$4) of carbon offset per month can balance the negative impact of emissions from driving a car!



### **Why should I support carbon offset projects?**

Carbon offset projects improve regional air quality and the environment. They mitigate harmful greenhouse gases that contribute to a warmer climate while supporting jobs and the economy.

### **Where do NC GreenPower carbon offsets come from?**

Priority will be given to projects in NC but if no acceptable carbon offsets are available, we will also consider SC and VA for acquiring carbon offsets. Current projects are being sourced from North Carolina.

### **What types of projects will be used to supply the carbon offset product?**

In addition to other resources, NC GreenPower will take the following types of producers into consideration: Methane Collection and Combustion – from farm animals, landfills or other industrial waste; Tree Planting – reforestation and avoiding deforestation. Energy efficiency and renewable energy certificates will not be considered.

### **What projects have been supported so far by NC GreenPower donors?**

Since the launch of the Carbon Offset program in October 2008, donations have helped landfills in North and South Carolina, as well as two North Carolina hog farms for methane gas collection from waste lagoons. Donations are currently supporting North Carolina landfills.

### **How are projects selected?**

In order to ensure that NC GreenPower acquires only reputable and certifiable carbon offsets, NC GreenPower has nine quality criteria for offsets. These criteria are listed below. More detailed information on each of the criteria is available on the NC GreenPower website. All projects have been validated either by [Climate Action Reserve](#) (CAR) or Verified Carbon Standard (VCS).

- 1) No RECs as carbon offsets
- 2) Additionality
- 3) Accurate Quantification
- 4) Clarity on Permanence
- 5) Appropriate Timeline
- 6) Demonstration of Ownership
- 7) Serialization and Tracking
- 8) Verified and Verifiable
- 9) Net Positive Impact

*NC GreenPower is an easy and effective way for you to balance your impact on the environment. This landmark nonprofit offers you two ways to make a difference – supporting Renewable Energy and Carbon Offsets. Renewable Energy creates cleaner energy sources. Carbon Offsets mitigate greenhouse gases.*

**Balance your impact on the environment. Support NC GreenPower today!**