

Offsetting Fossil Fuels on Your Way to Silver Bay

(and in the rest of your life, too*)

What Are Offsets?

Offsets are actions that help reduce the level of greenhouse gases in Earth's atmosphere.** They are often referred to as “carbon offsets” because the two most important heat-trapping gases released by the use of fossil fuels, carbon dioxide (CO₂) and methane (CH₄ or “natural gas”), are both carbon-based. When you create or purchase offsets, you are preventing emissions from fossil fuels or you are removing excess CO₂ from the atmosphere.

Why Should We Buy Them?

Offsets are NOT intended to make you feel less guilty about driving your car, flying in a plane, or keeping the AC on 24/7. The basic idea is that you *first reduce* your use of fossil fuels as much as possible, and *then use offsets* to balance the fossil fuels you can't yet avoid.

How Do Offsets work?

Well-designed offsets are permanent, ecological, and socially just.***

- Some offsets reduce the need for fossil fuels by increasing *energy efficiency and conservation*.
- Others create “right-scale” *renewable energy sources*.
- A third type actually removes heat-trapping gases from the atmosphere by *restoring and protecting complex ecosystems*, where carbon is naturally stored as part of the web of life.

All three types are essential components of a safe, ecological energy policy.

- You *create offsets* directly through your personal actions, such as driving less, installing solar panels, and planting trees.
- You can also *purchase offsets* by making tax-deductible donations to non-profit organizations that take similar steps on a larger scale.
- Both creating and purchasing offsets also help build political will on the state, federal and international levels for *public policies* that accelerate our transition to fossil-free energy sources.

How can I purchase fossil fuel offsets?

The following exemplary offset programs complement each other in ways that represent a template for a safe, ecological energy policy.

1. Reducing our use of fossil fuels:

The Finger Lakes Climate Fund is a unique offset program that reduces the use of fossil fuels by helping low-income families in central New York State make their homes more energy efficient.

Their *travel calculator* is precise, but easy-to-use (Ithaca to Silver Bay, round trip in a 35 mpg car, would cost \$1.93 to offset.) Their *household calculator* is fun to use, and credits you for each step you already take to reduce emissions, while giving you ideas for “next steps” to consider.

- *To purchase offsets:* fingerlakesclimatefund.org
- *For background info:* sustainabletompkins.org

2. Building renewable sources of energy:

Native Energy is a non-profit Native American organization that uses funds from offsets to build new wind, water, biogas, and solar projects on tribal lands and around the world.

Native Energy also has travel and household calculators, both of which use rougher estimates than the Finger Lakes calculators. Their travel calculator is designed more for offsetting emissions on an annual basis, rather than trip-by-trip.

- *To purchase offsets:* www.nativeenergy.com/travel.html
www.nativeenergy.com/household-carbon-calculator.html
- *For background info:* nativeenergy.com

3. Protecting complex ecosystems:

The Nature Conservancy's offsets programs protect forests that store carbon as trees and other living things. While their offset projects are based outside the United States, they recently sold land to NYS to expand "forever forests" in the Adirondacks.

- *To purchase offsets:* <http://www.nature.org/greenliving/carboncalculator/>
- *For background info:* www.nature.org/ourinitiatives/urgentissues/global-warming-climate-change/help/carbon-offset-program-meeting-the-highest-standards.xml

FINAL FUN FACT: When your car uses **one gallon of gasoline** (weighing just over 6 pounds), it **releases about 19 pounds of CO₂**.

NOTES:

*There will be a more detailed discussion of offsets on the Earthcare Working Group page of the NYYM website in the near future.

**402 parts per million: for every million molecules in the atmosphere, 402 of them are especially good at trapping heat from the sun. Before the Industrial Revolution, the level was about 280 ppm. Around 350 ppm is considered a likely upper limit for stable climate systems. Since methane degrades in the atmosphere much faster (12 years) than CO₂ (average of about 1,000 years), reducing BOTH methane and carbon emissions as quickly as possible is essential for getting below 400 ppm in our lifetimes. [Numbers cited from Chemical and Engineering News: <http://cen.acs.org/articles/92/i27/Methanes-Role-Climate-Change.html>]

***Not all offsets are created equally. For example, monoculture tree plantations are common in *carbon trading schemes*. However they do not help establish healthy ecosystems and are prone to releasing their stored carbon via forest fires and/or diseased trees. Thus it's important to only purchase offsets from non-profit organizations whose goal is to move us towards truly ecological energy policies (which also tend to be the most socially-just programs, since protecting local ecosystems provides long-term local jobs).