



A Local Solution to Global Pollution

Our pollution assumption for offset projects:

1.24 lbs of CO₂ are produced for each kWh generated or saved.

Compact Fluorescent Light bulbs in Asheville Housing Authority:



Using a single 13-watt compact fluorescent bulb instead of a 60-watt incandescent bulb saves 47W per hour. With a rated lifetime of 10,000 hours that will save 470 kWh over its lifetime.

Assuming 1.24 lbs of CO₂ are produced for each kWh generated:

1.24 lbs CO₂/kWh X 470 kWh=583 lbs of CO₂ per bulb over its lifetime. Therefore it takes 3.43 CFL bulbs to be changed out for each ton of carbon to be offset.

Using a single 20-watt compact fluorescent bulb instead of a 75-watt incandescent bulb saves 55W per hour. With a rated lifetime of 10,000 hours that will save 550 kWh over its lifetime.

Assuming 1.24 lbs of CO₂ are produced for each kWh generated:

1.24 lbs CO₂/kWh X 470 kWh=682 lbs of CO₂ per bulb over its lifetime. Therefore it takes 2.93 CFL bulbs to be changed out for each ton of carbon to be offset.

Using a single 26-watt compact fluorescent bulb instead of a 100-watt incandescent bulb saves 74W per hour. With a rated lifetime of 10,000 hours that will save 740 kWh over its lifetime.

Assuming 1.24 lbs of CO₂ are produced for each kWh generated:

1.24 lbs CO₂/kWh X 470 kWh=918 lbs of CO₂ per bulb over its lifetime. Therefore it takes 2.18 CFL bulbs to be changed out for each ton of carbon to be offset.

Solar Hot Water systems on affordable housing in WNC:



Assumptions:

These calculations compare a solar hot water system used for domestic water use only to the most efficient 40-50 gallon electric tank hot water heater. They use the conservative assumption that the solar system supplies an average of 65% of the hot water needs throughout the year.

Assuming the electric tank hot water heater uses 4622 kWh per year:

65% savings would = 3004 kWh/yr saved

Assuming 1.24 lbs of CO₂ are avoided per kWh saved:

The total number of lbs of CO₂ saved over a year would be: 3725 lbs CO₂.

Assuming a 20 year lifetime for the system the total offset would be:

74,506 lbs or 37.25 tons of CO₂ over 20 years