

# Study Finds Incinerator Helps Curb Emissions

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**Read the study on greenhouse gas emissions, paid for by Montenay Resource Recovery, operator of the Charleston County incinerator. [Results begin on page 4. \(73 page PDF\)](#)**

Here's a riddle with a surprising answer: Which has a greater impact on climate change, sending garbage to a landfill or burning it?

A study commissioned by Montenay Charleston Resource Recovery, operator of the incinerator in North Charleston that consumes about two-thirds of Charleston County's municipal garbage, concludes the incinerator helps reduce greenhouse gas emissions.

If all of Charleston County's municipal waste were sent to the Bees Ferry Landfill, which would happen if the county does not renew Montenay's 20-year contract, the study by GEL Engineering LLC found that emissions directly related to disposing of the county's garbage would soar at a time when South Carolina and cities including Charleston are searching for ways to reduce emissions.

The climate-change issue is expected to take a back seat to considerations about cost and neighborhood opposition when county officials consider the incinerator contract, but Montenay's study adds a new dimension to the discussion that has piqued the interest of conservationists. "It absolutely was surprising," said Coastal Conservation League Project Manager Hamilton Davis.

He said the league, which initially opposed the continued use of the incinerator, has concluded that the findings of Montenay's study appear correct. The league no longer opposes the incinerator and is taking a neutral position on the contract renewal issue.

Most scientists agree that man-made greenhouse gas emissions are driving climate change, raising average global temperatures and causing sea levels to rise.

Carbon dioxide, produced by burning fossil fuels such as coal and oil, is the focus of most efforts to reduce emissions, but other, more potent greenhouse gases play an important role, and that's the crux of the incinerator versus landfill issue.

"With the landfill, you've got decomposition, which releases vast amount of methane, which is an extremely potent greenhouse gas," Davis said. "From our research, and folks we've talked to, (the study) seems accurate."

Methane is a greenhouse gas 21 times as potent as carbon dioxide, and that's the main reason why Montenay's study found that sending garbage to Charleston County's Bees Ferry Landfill is more harmful, in terms of climate change, than sending it to the incinerator.

The study did not address incinerator emissions such as mercury, focusing only on climate-changing greenhouse gases.

"The greenhouse study we conducted for Charleston is, I think, the first of its kind in the United States," said Lee Bazzle, manager of the incinerator. "We went to great lengths to try to create a true model.

"There are lots of emissions that are released from a landfill, but because you can't see them, people aren't aware of that," he said.

In 2007, the incinerator generated the equivalent of 90,862 metric tons of carbon emissions while disposing of 215,290 tons of municipal waste, according to the study. Sending that same garbage to the landfill would have generated 226,055 tons of emissions, the study said.

In addition, the study concluded that the electricity generated by the incinerator eliminated 34,678 tons of emissions that would have been produced if the same electricity came from power plants in the state, and the recovery of ferrous metal from incinerator ash eliminated 908 tons of emissions that would have been generated producing that amount of metal.

Add it all up, and sending all the county's garbage to the landfill in 2007 would have increased emissions by 170,780 tons. So how significant is that level of carbon emissions?

It would take about 96,000 cars to generate 170,780 tons of carbon emissions in a year.

The S.C. Climate, Energy and Commerce Advisory Committee, established by Gov. Mark Sanford last year, proposed a goal of reducing carbon emissions statewide by 55 million tons by 2020.

When it comes to dealing with garbage, conservation groups and others concerned about climate change generally favor reducing waste and increasing recycling, but when it comes to disposing of garbage, there's been growing support for waste to energy operations.

The U.S. Conference of Mayors Climate Protection Agreement, signed by 916 mayors including those representing Charleston, Columbia, Greenville, Sumter and Clemson, suggests that cities "increase the use of clean, alternative energy by, for example ... supporting the use of waste to energy technology."

In January, officials in Berkeley County decided to pursue a potentially \$125-million plan to build a 35-megawatt biomass plant adjacent to that county's landfill, which would burn wood debris, sewer sludge, construction waste and raw timber to generate electricity. The Berkeley County plan also calls for capturing landfill methane and using it as a fuel source.

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