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Apr 12th, 10:10 AM - 10:30 AM

Enlisting the natural carbon cycle to inhibit global warming

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Oram, Gary A. Mr, "Enlisting the natural carbon cycle to inhibit global warming" (2014). *UM Graduate Student Research Conference (GradCon)*. 1.

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Over the past several years, 3 million acres of trees have been killed by the spruce beetle in Alaska. The Mountain Pine Beetle is devastating tree populations throughout the West. The Pinion Ips is killing trees in the Southwest.

Carbon dioxide cycles through the different strata. Like water it can be found in solid, liquid and gas form. A kettle of ordinary tap-water on the kitchen range would boil off. That same kettle of water setting in the window sill would still evaporate.

After they die, trees release carbon dioxide and large amounts of other gasses while they decompose. Historically greenhouse gasses were called decomposition gasses. Like water these same trees would release the same amount of carbon dioxide and greenhouse gasses if they were to burn.

Absent mankind on the planet nature will continue to add heat-trapping gasses to the warming atmosphere. At this point in the evolution of mankind, it is more beneficial for the environment if energies created in the processes of natural decomposition were harnessed and supplied to growing populations as electricity.

Households in America pay \$12 to \$1,300 annually for electricity services. For a population of 60 thousand that is 75 million dollars a year. In ten years that is 750 million dollars.

Each person in the United States uses roughly 10 thousand watts of electricity each year. A facility supporting power to 60 thousand people would need to generate 600MW. Using the most updated energy technology, a mill creating 600MW of electricity with wood fibers, would release nearly the same amount of carbon dioxide into the atmosphere as creating 600MW of electricity with "clean" coal. The only difference, wood fiber would release these carbons absent mankind on the planet in decomposition gas, coal, even natural gas would not.

The crux in the energy debate is people thinking it takes fossil fuels to harvest the source.

An agricultural based feedstock poses a problem: the release of nitrous oxide due to heavy fertilizer use. At present, it is more efficient to convert corn into sugar than it is to convert wood or grass lignin into the sugars needed for fermentation. This is usually a two-step process. With the discovery of *Clostridium phytofermentans*, bacteria that eats wood fibers and excretes ethanol, the process of wood pulp "Biochemical conversion" has been simplified into one simple step.

Three million acres equate to 4,687 square miles. According to the photosynthetic ceiling, it would take only 271 square miles of already dead and decomposing timberland to supply a population of 60 thousand people with carbon-neutral electricity--forever. An extended presentation would explain how eventual transportation, pyrolysis and distribution could be conducted without the use of fossil fuels.

Research methods for this analysis were analytical and quantitative, using illustrative and exploratory measures to study sites in Washington State, Western Wyoming, South Dakota, Alaska, and Idaho.