

Turn Yard “Waste” into an Opportunity
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DURHAM, NC – The on-going saga of Durham’s yard waste might be comical if the costs were not so high in dollars, energy, and wasted effort.

In a front page story last Thursday, the *Herald-Sun* reported that the City’s yard waste dump on East Club Boulevard was being re-opened to again be the repository of the city’s steady stream of wood, brush, and leaves. The state closed the dump last year, mandating that the city treat runoff from the dump, because in the distant past, real garbage had been co-mingled with yard waste.

The state is reviewing the city’s nearly \$1 million proposal for runoff treatment, and is expected to allow the dump to reopen in 30 to 90 days. With no yard waste dump for about a year, Durham has been forced to truck yard waste to a landfill in Virginia.

Because these problems follow the dump’s smoky fires of 2006, it would be tragic if the city were to reopen the dump and not recover any of the value that is in these organic materials. By continuing to treat yard waste as “waste,” the city is missing a special opportunity to reduce costs of yard waste processing, to eliminate storage, and to produce clean, sustainable energy.

The solar energy so magically stored in wood can be converted to human use by simple and direct combustion with emissions of pollution that are often far below those of conventional energy systems, including greenhouse gases.

Although wood burning is as old as history, advanced technologies allow remarkably clean and efficient release of energy *for heating and cooling*. Particularly of interest are decentralized, community-scale systems, such as those serving residents in thousands of towns and cities across the USA, Canada, and Europe. Durham can learn much from these experiences, as they document not only how municipal wood can be used for energy but also the impacts of these systems on communities, the environment, and finances.

Wood-fired technologies are rapidly evolving in the USA, Canada, and Europe. Many public schools in the Great Lakes region, New England, and Pennsylvania and the American West have converted to wood-based hot water and space heat systems. Towns, cities, and institutions such as universities, hospitals, and prisons are burning wood to heat and cool buildings. These systems are versatile and can even feed electrical power into the power grid.

Although woody biomass is no panacea for modern society, wood’s contribution can be substantial and rapidly implemented. Chief limitations include ensuring sustainability of wood supply, pollution control especially of fine particulates, and a full-carbon

budgeting. Good planning is needed to achieve reasonable financial return on investment.

Back in Durham, Duke University has taken steps to increase the sustainability of its overall operations, including reducing its fossil carbon footprint. One approach being evaluated is to lower Duke's reliance on coal in its West Campus Steam Plant by co-firing coal with woody biomass. If tests prove successful, one excellent possibility would be to co-fire coal with woody materials from the city's yard waste. With an agreement that would need DENR approval, such a project could benefit both City and University. Private sector jobs could be created to process, deliver, and ensure high quality woody materials delivered to the steam plant.

In overview, it is shortsighted and wasteful to bury yard waste in landfills. Processing woody materials that are collected by cities into locally useable products can be relatively inexpensive, environmentally beneficial, and rapidly implemented. It would be disappointing if the city were to continue to bury yard waste in its landfill and not reap some of the benefits that are available from these resources.

According to the *Herald Sun* last Thursday, city employees are clearly committed to upgrading the city's yard waste collection system. City leaders have contacts with the expertise and available knowledge base that can help recover the value in these organic materials that are currently treated as "waste." Any yard waste system that ends in the landfill needs replacement by one in which the value of wood and brush is much more fully captured.

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