NORTH CAROLINA
BAR ASSOCIATION
SEEKING LIBERTY & JUSTICE

Fourth Annual
Sustainability Essay Contest

The North Carolina Bar Association's Environment, Energy & Natural Resources Section is pleased to announce a sustainability essay contest, open to interested high school students.

Deadline for Submissions

Friday, May 4, 2018

Submissions should be sent to

EENRSustainabilityContest2018@gmail.com

The Winner of the Contest Receives

A **$500 prize** and publication[1] of the essay in the fall edition of *Environmental News*, the quarterly publication of the Environment, Energy & Natural Resources Section of the North Carolina Bar Association.

2018 EENR ESSAY CONTEST PROMPT

Solar energy has become an established source of renewable energy in North Carolina. Other technologies provide possible paths to a sustainable energy future in the state. For example, biomass is a renewable energy that is derived from plants and animals. Materials like wood or agricultural crops can be burned to release the stored energy available in the biomass. See https://www.eia.gov/energyexplained/?page=biomass_home

North Carolina defines biomass to include:

[1] The Environment, Energy & Natural Resources Section reserves the right to edit the essay for content or length prior to publication. All edits are subject to author approval. In the event the author and the Section have an irreconcilable conflict over content-related or other edits, the essay will not be published in *Environmental News*.

> "agricultural waste, animal waste, wood waste, spent pulping liquors, combustible residues, combustible liquids, combustible gases, energy crops, or landfill methane; waste heat derived from a renewable energy resource and used to produce electricity or useful, measurable thermal energy at a retail electric customer's facility; or hydrogen derived from a renewable energy resource." N.C. Gen. Stat. § 62-133.8(g).

Like solar and wind energy, biomass resources qualify as a "renewable energy resource" that meets North Carolina's Renewable Energy and Energy Efficiency Portfolio Standard (REPS). See N.C. Gen. Stat. § 62-133.8(a)(8).[2] However biomass (or "bioenergy"), is not yet an established renewable resource in North Carolina. Potential biomass technologies include the use of wood pellets burned as fuel,[3] and methane captured from animal waste facilities and used as natural gas.[4] Should North Carolina utilize these technologies as renewable energy resources?

In an essay of 2000 words or fewer, use the materials referenced herein, as well as any other materials you discover on line, to:

1. Explain the tradeoffs in (one or both) of these renewable sources. Tradeoffs include:

   - their impact on the environment
   - their relative "carbon neutrality"
   - their impacts on surrounding communities, including job creation and environmental justice concerns.[5]

2. Conclude whether, in light of these tradeoffs, we should utilize the biofuel you analyzed as a renewable energy source in North Carolina.

[2] North Carolina's REPS require that by 2018, ten percent of electricity sold in the state comes from renewable energy, and by 2021 that number goes up to 12.5 percent. N.C. Gen. Stat. § 62-133.8(b)(1).
[3] See 2015 Nicholas Institute Report on the demand for wood pellets: https://nicholasinstitute.duke.edu/environment/publications/sustainability-guidelines-and-forest-market-response-assessment-european-union-pellet#.VWXHp9JVhBc; and WUNC's 2017 discussion of controversy over the technology: http://wunc.org/post/controversy-simmers-over-nc-wood-pellet-plant#stream/0
[4] See 2016 Wall Street Journal article on EDF deal with Smithfield Foods: https://www.wsj.com/articles/smithfield-sets-plan-to-cut-carbon-emissions-by-a-quarter-1480870861
[5] Environmental justice refers to the disproportionate pollution burden placed on minority and low-income communities.