

Environmental Management Commission  
Attention: Renewable Energy Scoping Process  
1617 Mail Service Center  
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Subject: Comments in response to Scoping Request for S.3 Rulemaking  
Date: March 31, 2008  
From: Anne Blair, Southern Alliance for Clean Energy



We commend the State of North Carolina's Environmental Management Commission (EMC) for taking the initiative to launch this scoping process. We are very encouraged by this proactive effort to evaluate the regulatory framework for development of renewable energy industries and to identify environmental concerns before they become problems. Overall, we would like to encourage the state to promote distributed generation of renewable electricity using diverse, sustainable resources.

While Southern Alliance for Clean Energy works to promote many forms of renewable energy, the information we are providing here is primarily focused on bioenergy. Our organization works in Georgia, Florida, North Carolina, South Carolina and Tennessee. We are uniquely aware of renewable energy developments throughout the entire Southeastern region and the benefits and challenges that the region faces in growing renewable energy. Bioenergy, which shows the greatest potential, may also be the most challenging set of resources to tap in a sustainable manner. Both biofuels and biopower seek to consume some of the same resources, which will limit the available supply of feedstock for each objective. These competing industries might drive up prices to a point where neither can reach its full potential. The Southern Alliance for Clean Energy constantly strives to ensure that the bioenergy industries grow in a way that avoids both harmful environmental impacts and other unintended consequences.

**We offer the following principles for consideration in growing bioenergy in North Carolina:**

- New markets are needed for trees, forest products, and woody biomass to help private landowners avoid permanent land use changes – the worst fate for forests and the climate.
- New generation capacity should be distributed around the state for maximum efficiency, economic and community benefit and minimum environmental impact.
- New biopower feedstocks should be grown and harvested in a manner that does not deplete the soil, pollute the water, or contribute to an increase in greenhouse gas (GHG) emissions.
- New demand for woody biomass should be limited to existing tree farms, pine plantations, and croplands wherever possible, but should not prohibit other harvests for the purpose of increasing productivity of degraded woodlands.
- Biomass removed from public lands should only be as a result of other management objectives, conducted in compliance with all federal and state laws.
- New regulations should not hinder development of the industry, but should ensure development that meets the needs of the state without depleting resources or harming natural cycles for future generations.
- Ultimate policy should be designed in line with regional and global sustainability, with consideration to impacts outside our state boundaries.

**Specific Concerns:**

- Full implementation of Best Management Practices in forestry.
- Expand professional certification of foresters by requiring state licensure.
- Require Forest Management Plans / Pre-Harvest Plans.
- Provide need-based grant funds for development of Forest Management Plans and other necessary technical assistance.
- Sufficient support for enforcement of current regulations of logging operations.
- Intelligent coordination of regulatory oversight (e.g., water quality inspections need to be coordinated with paperwork completion; carbon credits or Renewable Energy Credits should be withheld in cases of non-compliance).

**Lifecycle Impacts:**

- Replanting and succession is certified or otherwise assured to prove carbon neutrality.
- Soil impacts: research needed on benefits of biochar and impacts of rotations on soil carbon
- Residual debris requirements should be sufficient to continue the soil-nutrient cycle, slow rainfall and prevent runoff, but should not prevent cost-effective harvest of woody biomass (3 to 10 tons per acre is the current range of the debate)
- Co-firing is generally less preferable than new, dedicated biopower installations (Concerns: ash / flyash disposal, landscape impacts due to spatially concentrated demand, lesser economic benefit than with distributed generation).

The EMC expressed interest in gathering information in a number of areas, in response to which we offer the following:

**Current status of bioenergy development activities in NC**

Southern Alliance for Clean Energy maintains a database of power plants and biorefineries consuming biomass in our five-state territory. By tracking biopower and biofuels facilities – both proposed and operational – we gain insights into approximate demand for the various biomass resources that feed these industries. However, we rely upon published announcements to inform this database.

Developments are proceeding rapidly in response to S.3, the federal Renewable Fuel Standard, and European demand for biomass, in many cases away from the public eye. For this reason we urge the EMC to consult with individuals receiving on-going inquiries from the plant developers, first hand. Dr. Dennis Hazel and Dr. Alex Hobbs are two such people upon whom we rely for up-to-date anecdotal reports of developments in North Carolina, specifically. Dr. Hazel is a forestry extension specialist and assistant professor at NC State University's College of Natural Resources. Dr. Hazel has a keen appreciation for the need for new markets for forest products and the limits constraining them. Dr. Hobbs is a professional engineer with the NCSU Solar Center.

Human health, environmental, and community impacts associated with bioenergy development While the human health effects of burning biomass for energy are fairly well documented, the environmental and community impacts of increased utilization of these resources are not as well understood. We are concerned that if electric utilities' main response to S.3 is co-firing of biomass in existing coal-fired power plants, the impacts on communities and the environment may be concentrated. The biomass resources are distributed, yet coal plants are centralized and local. Transportation costs will constrain harvest of biomass and may result in price inflation or locally excessive harvest of the resource. We request that co-firing be used as a tool to develop the biomass markets – but with a specific timeline in mind for a transition to distributed generation in dedicated biomass power plants. Smaller,

dedicated biomass power plants (i.e., 15 to 50 Megawatt scale) can be located closer to the resources. The result will be less price volatility in the biomass, greater long-term economic viability for the power plant, more jobs, and more positive impacts on the community. Co-firing of biomass is desirable to the extent that it is relatively easier to implement in a short time-frame, and it is easier to suspend co-firing if problems develop.

In general, we support most forms of biopower, but we recognize technical and economic differences. There are some superiorities of gasification versus combustion, especially poultry litter. We recommend a strategy that encourages development of experimental technologies on a pilot basis (such as anaerobic digester technologies), with potential relaxation of rules on a limited basis to prove feasibility.

**Existing regulations governing bioenergy facilities in North Carolina (including federal, state, regional and local contexts)**

To our knowledge, the existing regulatory framework is poorly equipped to handle significant interstate trade in biomass resources. For example, in the Gulf Coast states of Alabama and Florida, three large wood pellet mills have been proposed or built for exporting product to Europe during the past year. In nearby south Georgia, Range Fuels will be making cellulosic ethanol later this year, consuming an estimated 200,000 to 1 million tons per year of whole pine trees. Once in operation, these plants together will consume an estimated 1.85 million tons per year of wood from this three-state region. Timber brokerage reports are already noting the impact on prices from the first plant.

Given the rapid development of wood pellet mills in the Gulf Coast region, it is conceivable that a few large plants might have unintended impacts on the price of woody biomass and on the available resource base. Biomass power plant approvals should be made with consideration to interstate and regional impacts.

**Best practices from other states**

North Carolina is rare among states with its weak regulation of the forestry profession. For example, we are one of only three states that do not require any field experience (Connecticut, Mississippi and North Carolina). NC also does not have licensure of forestry professionals. Our current laws leave the state ill-equipped to regulate the harvest of what should be a sustainable crop, under best management practices and professional licensing. Laws requiring licensure and enhancing the training and development of the industry's professionals will help improve the sustainable use of woody biomass for energy in the state.

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