



Office of Science and Technology Policy

Request for Information: Building a 21st Century Bioeconomy

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The Administration has published a *Request for Information* soliciting input and recommendations for meeting national challenges in health, food, and energy while creating high-wage, high-skill jobs. Responses will be utilized in the development of a National Bioeconomy Blueprint.

I submit comments reflecting the experience and strategic recognitions of this Center in crafting a sustained, policy-based, comprehensive approach to biofuels development across our landscape.

BACKGROUND

The Biofuels Center strongly affirms the statement found in the solicitation that “(t)wenty-first century advances in biological research and technologies are poised to return tremendous benefits to the public.” North Carolina’s endeavor to develop a biofuels sector within our state is commensurate with the above recognition and will create widespread gain for our citizens.

By policy and strategy, North Carolina has committed to gain large capacity for biofuels and has set an ambitious goal: ***by 2017, 10% of the state’s liquid transportation fuels will come from biofuels grown and produced internally.***

North Carolina’s biofuels policy goal supports the national Renewable Fuel Standard mandate of 36 billion gallons of biofuels to be produced by 2022. This Center’s approach addresses a recognition as simple in statement as challenging to implement: to meet that national goal, ***America needs new models to produce large amounts of liquid fuel from materials other than corn in places other than the Midwest.***

The nation at present lacks that model and those places. North Carolina is working within a logical approach to gain that model and verify that other states can create biofuels. In doing so,

this state works over time to create leadership, a new agricultural sector, new technology, large production capacity – and millions of gallons of fuel.

Committed state policy and the comprehensive approach described below are judged a strong and necessary foundation. Technology and production companies have taken note as they seek new sites nationwide.

DEVELOPMENT OF THE BIOFUELS SECTOR: A GRAND CHALLENGE

The *Request for Information* calls for the identification of “grand challenges”— areas and issues that will transform the Bioeconomy in health, energy, the environment, and agriculture. North Carolina, presuming to trigger statewide the transformation from a fossil fuel based transportation sector to a biofuels based transportation sector, is well aware of both the importance and the enormity of such societal challenges.

Creating a new biofuels sector across North Carolina is an enormous long-term task for three reasons:

- In 2007, upon establishment of the Biofuels Center, North Carolina had minimal biofuels capability and gained no attention from technology and production companies.
- Creation of an agriculturally-based, complex, expensive and enormous new sector and new technology across the landscape is unprecedented and without model.
- Because corn is by policy not the foundation for biofuels in North Carolina, other feedstocks available sustainably, in quantity, and with economic return must be gained.

Development of a new biofuels endeavor across North Carolina is without precedent in complexity of tasks and implications, but possible if a key recognition underlies policies and activities: development of large biofuels capacity must be seen as **landscape changing**, actually and figuratively, and as such must be judged nothing less than **a societal and civic imperative**. Gaining that capacity, after all, necessarily synthesizes key components of civic society: energy, agriculture, policy, environment, technology, economic gain, and provident preparation for the future.

Such thinking, both bold and common-sensical, shapes work of the Biofuels Center. The Center’s endeavor and approach spring from four compelling and strong imperatives:

- Smart places and leaders now must strategically address their energy future as crucial for their future success and daily survival.
- An enormous and feasible new sector, well matched to a state strong in both agriculture and technology, will be created.

- Economic and societal gains will come across the state, largely in rural and agricultural counties most in need of economic advantage. Realistic opportunities for sustained rural gain are few and merit continued support.
- Job and economic enrichment will be as strong or stronger in existing areas – forestry, agriculture, logistics and distribution – as in new production facilities.

A COMPREHENSIVE APPROACH

Judged the nation's only agency working comprehensively over time for all aspects of biofuels development, the Biofuels Center was established to meet the state goal and shape a 10-15 year civic endeavor statewide.

North Carolina's approach to biofuels development is comprehensive, based on the recognition that piecemeal attention to resources and tasks yields uncertain success. A dovetailed framework of strategy and activities must integrate every aspect of biofuels development, from governmental policy to land and consumer choice.

The nation's only state-based agency constituted with a comprehensive mandate, the Center addresses over time: research, growing and agronomic analysis, pilot and large scale production, company development, distribution, land use, environmental and policy issues, and public education.

Specific requirements are varied, including: farmers and landowners must commit to new feedstocks and new uses of biomass; economic analyses must verify that money can be made in growing, production, and distribution; consequential issues must be addressed, for large impact will be seen on land, biodiversity, water, and the environment; policy commitment must be sustained through years, political changes, and the setbacks inevitably handmaiden to new technology.

FEDERAL AND STATE POLICY

Sustained and committed federal biofuels policy has never been more important. That policy imperative is now threatened by budgetary problems and short-sighted vantage points. Articulation and defense of national goals to maintain the Renewable Fuel Standard – the sensible imperative and foundation for biofuels goals nationwide – is imperative. Consistent and strong biofuels programs and funding from the Department of Energy (DOE) and the Department of Agriculture (USDA) are now more critical than ever. A nation confronting the

profoundly significant cusp from a fossil fuel based sector to a biofuels sector requires cohesive commitment, sustained support, and policy certainty.

Federal programs managed by DOE and USDA strengthen the biofuels sector and verify the value of purposeful biofuels development for rural economic gain, greenhouse gas reduction, and energy independence. In particular the USDA loan guarantee programs for biorefineries are critical to the development of the biofuels industry in North Carolina as nationwide. Other innovative programs, such as the Biomass Crop Assistance Program, also provide needed support to this nascent industry.

At the same time, biofuels – because potentially to be gained from so many places with equal and not necessarily competitive success – can impel increasingly deliberate attention within the life and goals of states, yielding both need and gain. State biofuels commitment can augment and support federal programs. Doing so enables a return to a clearly necessary model of more local fuel production. States can shape policies and support, as we are working to do in North Carolina.

The *Request for Information* correctly recognizes public-private partnerships as requisite to build the bioeconomy. The Biofuels Center implements that approach through widely varied multi-party projects, on the reasonable premise that both societally significant changes and new technologies are never gained from a single vantage point or entity. Among the most nationally resonant of such projects is development North Carolina's Biofuels Campus, located on 426 acres of farm and forest land within 30 miles of the nationally renowned Research Triangle Park.

SHARED IMPERATIVE

A bioeconomy shaped by both vision and practical strategies can indeed vitalize America's workforce and economy. In North Carolina, long-term and purposeful commitment to both biofuels and biotechnology well verifies that expectation.

Having learned much about development of a statewide biofuels endeavor, this Center will with pleasure share experience and ideas with the Administration in implementation of the Bioeconomy Blueprint.

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