



**A STRATEGIC PLAN FOR
NORTH CAROLINA'S BIOFUELS INDUSTRY**

**INTERIM STATUS REPORT
SUBMITTED TO:
THE ENVIRONMENTAL REVIEW COMMISSION
17 JANUARY 2007**

GUIDING PREMISES

Strategies and thinking about North Carolina's biofuels endeavor must be shaped over coming years by seven key premises:

- 1) Strong and sustained state policy is required to shape outcomes and leadership.
- 2) The endeavor requires long-term commitment by varied parties – institutional and government, public and private, state and federal.
- 3) Advanced science and technology, and in particular biotechnology, will be key to success, outcomes, and leadership.
- 4) All involved parties and steps in the movement from science and research to production, distribution, and use must be addressed comprehensively.
- 5) Particular local and regional capabilities must be identified and addressed.
- 6) Responsibility for coordination, assistance, and policy implementation over time must be positioned in a single entity.
- 7) Activities and outcomes must work for agricultural and rural benefit(s).

NORTH CAROLINA'S STRATEGIC PLAN FOR BIOFUELS LEADERSHIP

THE BIOFUELS IMPERATIVE

Development and application of biofuels from varied sources will be increasingly significant to North Carolina's economy, consumers, and agriculture. As a result, state leaders and organizations share the recognition that attention to biofuels must be a matter of state policy, addressed cooperatively and comprehensively by varied parties statewide. Coming years will impel new sources of fuels, and North Carolina is remarkably well positioned to shape science, biotechnology, agricultural resources, and policies into a position of national biofuels leadership.

The recognition triggered a June 2006 Biofuels Summit at the North Carolina Biotechnology Center. Catalyzed by Senator Charlie Albertson and Representative Dewey Hill, the event brought together fourteen institutional leaders for a first ever targeted discussion of the imperative for informed, future-directed state planning and policy.

Reflecting this imperative, the General Assembly in its 2006 session passed Senate Bill 2051: State Energy Use/Energy Assistance, which in Part III calls for development of a Biofuels Industry Strategic Plan.

Four parties are designated in the legislation as the co-convening Work Group for this Plan: the College of Agriculture and Life Sciences at North Carolina State University, the School of Agriculture and Environmental Sciences at North Carolina Agricultural and Technical State University, the North Carolina Biotechnology Center, and the North Carolina Rural Economic Development Center.

In addition, the legislation calls for involvement of twelve other institutions and organizations as well as other appropriate entities. These parties were constituted in September 2006 as the Project Steering Committee.

The Steering Committee serves actively as focal point for gathering information and testimony, as a functional working group in its key meetings, as strategic respondent, and as partner to the Project Co-conveners in shaping the final report, *North Carolina's Strategic Plan for Biofuels Leadership*. This initial report is being submitted to the Environmental Review Commission by January 15, 2007, with a final report to be submitted by April 1, 2007.

PROJECT GOAL

The *Strategic Plan* synthesizes and conveys the best thinking of individuals and institutions statewide around a central question: *What policies, resources, and partnerships are required for North Carolina's long-term leadership in, and gain from, the emerging biofuels sector?*

Ideas, experience, and recommendations are sought from diverse parties, to shape thinking for both the initial framework and final *Strategic Plan*.

PROJECT CO-CONVENERS

Steven Burke	North Carolina Biotechnology Center
Billy Ray Hall	North Carolina Rural Economic Development Center
Ghasem Shahbazi, PhD	North Carolina A&T State University
Secretary E. Norris Tolson	North Carolina Department of Revenue
Johnny C. Wynne, PhD	North Carolina State University

PROJECT STEERING COMMITTEE

Senior designated representatives from more than 30 key vantage points are actively engaged with the Committee:

- Appalachian State University
- Department of Administration
- Department of Agriculture and Consumer Services
- Department of Commerce
- Department of Environment and Natural Resources
- Department of Revenue
- Department of Transportation
- Farm Bureau Federation
- Golden LEAF Foundation
- Lotus Engineering
- North Carolina Advanced Vehicle Research Center
- North Carolina Forestry Association
- North Carolina Agribusiness Council
- North Carolina Agricultural and Technical State University
- North Carolina Biomass Council
- North Carolina Biosciences Organization
- North Carolina Biotechnology Center
- North Carolina Community College System
- North Carolina Rural Economic Development Center
- North Carolina Solar Center
- North Carolina Soybean Producers Association
- North Carolina State Grange
- North Carolina State University
- North Carolina Sustainable Energy Association
- Novozymes, Inc.
- Office of the Lieutenant Governor
- Office of Science and Technology, Department of Commerce
- Piedmont Biofuels
- State Energy Office, Department of Administration
- United States Army, Fort Bragg
- University of North Carolina

PROJECT TIME LINE

2006	
June	Biofuels Summit - Catalyzed by Senator Charlie Albertson and Representative Dewey Hill, the event brought together fourteen institutional leaders for a first- ever targeted discussion of the imperative for informed, future-directed state planning and policy.
August	Senate Bill 2051 – The General Assembly in its 2006 session passed <i>Senate Bill 2051: State Energy Use/Energy Assistance</i> ; Part III of the bill calls for development of a Biofuels Industry Strategic Plan
October 17	First Steering Committee Meeting - Steering Committee members and varied statewide parties met. Presentations and discussion revealed a range of ideas, imperatives, and activities on which to build.
October – December	Submitted Recommendations – Steering Committee members and engaged parties submitted more than 130 ideas, clear needs, competitive long-term thinking, and realistic strategies required for North Carolina’s economic and societal gain from biofuels in the coming years. Submitted content yielded an initial draft document.
December 14	Second Steering Committee Meeting – The Steering Committee met to shape an initial framework for the <i>Strategic Plan</i> . Smaller work groups were established to focus on content areas deemed essential for an effective strategic plan.
December 15 – January 15, 2007	Interim Report – The Co-Conveners prepared an interim report on the development and status of the strategic plan, including preliminary findings, recommendations, and legislative proposals to the Environmental Review Commission for evaluation beginning January 15, 2007.
2007	
January – February	Work Groups – Work groups will meet to finalize recommendations, findings, and legislative proposals organized around seven guiding premises and five broad strategic categories
February	Third Steering Committee Meeting – Date to be determined. Committee members and engaged parties will review recommendations, findings, and proposals submitted by the work groups.
February – March	Final Synthesis – Steering committee members and engaged parties— under the leadership of the five co-conveners—will synthesize submitted content into the final strategic plan for presentation to the Environmental Review Commission.
April 1	Final Report - The Biofuels Industry Strategic Plan Work Group will submit a final report on the development of the strategic plan to the Environmental Review Commission no later than April 1, 2007.

STRATEGIES: ORGANIZATIONAL LEADERSHIP

Strategies in organizational leadership will focus on a central coordinating entity, institution, or agency as required to chart the next years of biofuels development and strategy. Proposals and recommendations will explore a designated authority within the state that has the budget and political endorsement needed to implement a bold, imaginative, and comprehensive alternative fuel industry plan.

STRATEGIES: MARKET TRANSFORMATION

Market Transformation strategies will identify and promote policies that will eliminate market barriers and increase opportunities for expanding a biofuels market and industry in North Carolina. Market transformation proposals will identify ways in which North Carolina can move toward fuel and energy independence while maintaining the highest levels of environmental stewardship.

STRATEGIES: SCIENCE, RESEARCH, DEVELOPMENT, FEEDSTOCKS, AND BIOMASS

Well thought-out strategies are needed for the scientific research and development of feedstocks and biomass. An economic analysis is needed to identify the best potential feedstocks that could be utilized for biofuels production in North Carolina. The costs and timetables for completion and implementation—with due attention to biotechnology—are critical elements in fostering a biofuels industry in North Carolina. Strategies will focus on an advanced and chronological look at how to grow and use crops:

- Short-Term – Use existing feedstocks and biomass;
- Mid-Term – Modify and improve existing feedstocks and biomass; and
- Long-Term – Develop new feedstocks and biomass.

STRATEGIES: PRODUCTION AND DISTRIBUTION

Production and distribution recommendations will focus on strategies to ensure biofuels in North Carolina are produced and supplied safely and reliably. Proposals will address full-scale distribution infrastructure, retail availability, upgrade and strengthening of production and supply systems, and work force training needs.

STRATEGIES: CULTURE AND EDUCATION

Strategies and proposals will focus on comprehensive public relations and education initiatives that will create public awareness and understanding of the benefits of a biofuels industry and alternative energy use in North Carolina. Biofuels public education is needed to induce lasting changes in consumer behavior and in the marketplace. Moreover, due attention must be paid to cultural imperatives to adopt needed changes in behaviors (i.e. growers, distributors, existing users of crops, consumers).

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2005

SESSION LAW 2006-206
SENATE BILL 2051

AN ACT TO REDUCE ENERGY, FUEL, AND WATER CONSUMPTION IN THE STATE THROUGH: (1) DEVELOPMENT OF A PLAN TO INCREASE THE AVAILABILITY AND USE OF ALTERNATIVE FUELS IN STATE-OWNED VEHICLE FLEETS; (2) PROVISION OF ENERGY ASSISTANCE TO LOW-INCOME PERSONS; (3) DEVELOPMENT OF A STRATEGIC PLAN TO EXPAND THE BIOFUELS INDUSTRY IN NORTH CAROLINA; AND (4) STUDY MECHANISMS TO IMPROVE ENERGY AND WATER CONSERVATION IN STATE-OWNED FACILITIES.

The General Assembly of North Carolina enacts:

... PART III. DEVELOP BIOFUELS INDUSTRY STRATEGIC PLAN

SECTION 3.1. There is established the Biofuels Industry Strategic Plan Work Group. The purpose of the Work Group is to develop a strategic plan for expansion of biofuels as an industry in North Carolina. The Work Group shall include representatives of the College of Agriculture and Life Sciences at North Carolina State University, the School of Agriculture and Environmental Sciences at North Carolina Agricultural and Technical State University, the North Carolina Biotechnology Center, and the Rural Economic Development Center, Inc. In developing this strategic plan, the Work Group shall delineate the increasing role of biotechnology in the development of biofuels and may consult with all of the following:

- (1) The Department of Administration.
- (2) The Department of Agriculture and Consumer Services.
- (3) The Department of Commerce.
- (4) The Department of Environment and Natural Resources.
- (5) The Department of Transportation.
- (6) The University of North Carolina System.
- (7) The Community College System.
- (8) The North Carolina Solar Center at North Carolina State University.
- (9) The North Carolina Farm Bureau Federation.
- (10) The North Carolina State Grange.
- (11) The North Carolina Agribusiness Council.
- (12) The North Carolina Forestry Association.
- (13) Representatives of private industry that are engaged in biotechnology and the biofuels industry.
- (14) Any other entity that the Biofuels Industry Strategic Plan Work Group deems appropriate, particularly entities that are engaged in biotechnology and the biofuels industry.

SECTION 3.2. The Biofuels Industry Strategic Plan Work Group shall submit an interim report on the development of the strategic plan, including any preliminary findings, recommendations, and legislative proposals, to the Environmental Review Commission no later than 15 January 2007. The Biofuels Industry Strategic Plan Work Group shall submit a final report on the development of the strategic plan, including any findings, recommendations, and legislative proposals, to the Environmental Review Commission no later than 1 April 2007.

For information, contact Project Co-conveners or:

Jason Nelson

Biofuels Project Coordinator

North Carolina Biotechnology Center

jason_nelson@ncbiotech.org • Direct 919-549-8803 • Fax 919-990-9544