



North Carolina's
Strategic Plan for
Biofuels Leadership

Fueling North Carolina's Future
North Carolina's Strategic Plan for Biofuels Leadership

Submitted to the Environmental Review Commission,
North Carolina General Assembly
From
Project Co-conveners and Steering Committee

1 April 2007

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Imperative and Vision Well Combined

What combination of vision, policies, and resources is required for North Carolina to develop a liquid biofuels industry that is substantial in output, agriculturally and economically important, sustainable, and significant across the State?

Almost 5.6 billion gallons of petroleum-based liquid fuels are consumed by North Carolinians each year.

Every gallon is produced elsewhere, yielding main economic return elsewhere. Each gallon verifies further that citizens are dependent upon fuels produced in other places, not all of which are reliably attentive to State or national security. No gallon contributes to the agricultural, forestry, or production economy of North Carolina.

North Carolina is well-advised to gain internal capability for production of a measurable percentage of its liquid biofuels consumption. Doing so reflects increasingly strong national and federal mandates, and is also mirrored by other states – many of which are targeting biofuels development far more aggressively and measurably than North Carolina. More importantly, gaining increased internal biofuels capability is eminently feasible in this State in coming decades. North Carolina is remarkably well-positioned to shape science, biotechnology, agricultural and biomass resources, smart participants, and policies into an internally strong biofuels sector.

In fact, more is realistically possible. With the right grouping of vision, strategy, and resource commitment over time, North Carolina can gain Mid-Atlantic and Southern leadership in a growing biofuels industry in coming years.

Many resources and capabilities will work together for this outcome. Among them, methodical and strategic development of new fuel feedstocks will be key. Few states can study, adapt, and grow as many possible sources. Canola, switchgrass, hullless barley, coastal Bermuda grass, industrial sweet potatoes, and miscanthus are among possibilities, along with animal waste, algae, and forest-based resources. As a result, North Carolina's future will target these feedstocks – as well as crops perhaps today barely envisioned – and will not be based on corn.

Working for these crops, a new industry, and increased biofuels capability impels sustained State policy and leadership. Resources must be committed. Varied institutional parties, public and private, must work together for common purpose. Thinking and outcomes must be shaped by the significance of the task, which remarkably touches so many large components of North Carolina's life and landscape: environmental stewardship, transportation and consumers, science and research, agriculture and forestry, counties, economy, and security.

Addressing the question above and these interrelated components has been for seven months the task of more than 70 engaged North Carolinians statewide. Their work, thoughtful discussion, and sound ideas have yielded this *Strategic Plan for Biofuels Leadership*.

Results are sound, practical, and encouraging, and so is the responsible future-thinking at hand. Is any state better prepared to address the imperative for biofuels leadership?

Project Process and Approach

North Carolinians have a tradition of coming together to address ideas and needs important to the State's future. Our ability to do so has been since June of 2006 directed effectively to biofuels.

In June of 2006, a first-ever *Biofuels Summit* convened 15 State, academic, and corporate leaders around the imperative for informed, future-directed State planning and policy. Key legislative participants, including Senator Charlie Albertson and Representative Dewey Hill, judged the imperative significant enough to catalyze legislation. In August, *Senate Bill 2051: State Energy Use/Energy Assistance* passed, mandating a statewide strategic plan.

The legislation yielded the process for *North Carolina's Strategic Plan for Biofuels Leadership*, a Project:

- Led by five Co-conveners: 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, the North Carolina Rural Economic Development Center, and Secretary of Revenue E. Norris Tolson.
- Guided by a 24-member Steering Committee, comprised of the Co-conveners and appropriately diverse parties statewide, as listed on page 8.

Discussions and ideas were shaped in full Steering Committee meetings or in five Strategic Workgroups: Organizational Leadership; Market Transformation; Science, Research, Development, Feedstocks, and Biomass; Production & Distribution; and Culture & Education. In addition, all participants were requested early in the process to submit their initial roster of ideas, recommended activities, or suggested strategies, to trigger Committee learning and discussion.

Taken in total, the roster of ideas, recommendations, and strategies revealed main areas of necessary attention, yielded a logical framework for action over time, and provided a foundation for the broad strategies. Funding requirements were carefully considered and set.

The widely varied participating citizens worked productively, smartly, and very collegially. Their synthesis and consensus yielded this document and the Nine Realistic Strategies that follow.

Nine Realistic Strategies

North Carolina's goal is simple and bold in statement but challenging to bring about over time: *to develop a liquid biofuels industry that is substantial in output, agriculturally and economically important, sustainable, and significant across the State.*

Bringing about this outcome requires a smart combination of sustained policy, resources, and vision. Varied parties must work productively and interactively together over time. Commitment must be maintained over years, possibly decades, and will be shaped by new learning and expected challenges.

The following nine strategies in total address and bring together the combination of commitment, practical tools, and guiding vision required for comprehensive, cohesive activities statewide over many years.

STRATEGY 1 • Realistic Vision and Compelling Public Commitment

A **compelling goal** will shape policy and actions – and also trigger commitment and passion – by citizens, leadership, and institutions statewide:

North Carolina's vision is strong and ambitious. By 2017, 10 percent of liquid fuels sold in North Carolina will come from biofuels grown and produced within the State.

REQUIRED: Legislation and widespread endorsement of State leaders.

MORE INFORMATION provided under *Strategies Delineation*, on page 10.

STRATEGY 2 • Statewide Biofuels Commission

A **new entity** must be constituted to guide and oversee North Carolina's sustained, high-level, and policy-based biofuels initiative over time. Possibly a State-level Commission established by the General Assembly with staff assistance provided by a nonprofit, it will be granted lead responsibility and authority for: policy development and oversight, building upon appropriate work already undertaken by varied parties statewide, coordination and assistance for the ongoing work and missions of varied parties statewide, development of key activities, identification and implementation of specific programs and incentives, funding of certain research or development activities, and targeted progress reports to public, policy, and legislative leaders. Working for comprehensive, effective, and steady movement from research and development to deployment – production, distribution, and use statewide – will be a key mandate as well as responsibility. A catalyst and convener in approach, the Commission will constitute and draw on Task Forces and other groups statewide.

REQUIRED: Legislation and funding of \$500,000 annually.

MORE INFORMATION provided under *Strategies Delineation*, on page 10.

STRATEGY 3 • Statewide Economic Development Imperatives

Because development of biofuels offers extraordinary opportunity for gain statewide, **sustained State policies and activities** must work aggressively for:

- National security
- Economic security
- Rural development
- Gain to farmers and agriculture
- Environmental benefits and stewardship
- Identification and development of local and regional resources, feedstocks, and production facilities

REQUIRED: Sustained commitment over time by State leaders and all involved parties.

MORE INFORMATION provided under *Strategies Delineation*, on page 11.

STRATEGY 4 • Creation of a New Industry Sector

Given its unparalleled biotechnology, agricultural, forestry, and resource strengths, North Carolina can realistically work for development within 10-15 years of:

- **A new biofuels industry** and economic sector statewide.
- **Mid-Atlantic and Southern leadership** within that industry.

Attaining both goals must inform all of the above activities and strategies.

REQUIRED: Sustained commitment over time by State leaders and all involved parties.

MORE INFORMATION provided under *Strategies Delineation*, on page 12.

STRATEGY 5 • A Biofuels Roadmap Across the State

Craft, implement, and continually refine a **coordinated plan** for development, production, and commercialization of biofuels throughout North Carolina, building on work undertaken to date by parties statewide. Resources, policy, and involved entities statewide must be merged. All involved parties and steps in the movement from science and research to feedstocks, production, distribution, worker training, and consumer utilization must be comprehensively addressed and integrated.

To be undertaken by the *Statewide Biofuels Commission*, working with its constituted Task Forces and partners statewide.

REQUIRED: Participation and leadership from all parties statewide and from the *Statewide Biofuels Commission*.

MORE INFORMATION provided under *Strategies Delineation*, on page 12.

STRATEGY 6 • Science, Research, and Development Capabilities

Research programs and resources at universities and other facilities statewide provide the requisite foundation for:

- Identification and development of improved or new feedstocks that can be particularly and efficiently grown, harvested, stored, and processed in North Carolina: *\$4.5 million initial estimate*
- Development of processing capabilities, treatments, and enzymes key to efficient and competitive development of new feedstocks, including those from forests and other cellulosic sources: *\$14.5 million initial estimate*
- Agricultural, forestry, and agronomic development, exploration, and testing: *\$2 million initial estimate*
- Small scale pilot/deployment/processing plants to speed the movement of research to outcomes: *\$4 million initial estimate*

Targeted and prioritized research over time will yield:

- *Short-term* use of existing feedstocks and process technology.
- *Mid-term* modification of existing feedstocks and process technology.
- *Longer-term* development of new feedstocks and process technology.

Priorities and goals for science, research, and development activities and funding will be established by the *Statewide Biofuels Commission*.

REQUIRED: Total funding of \$25 million will be requested from legislative appropriation.

MORE INFORMATION provided under *Strategies Delineation*, on page 12.

STRATEGY 7 • Advanced Biofuels Acceleration Facility

Establishment of a **nationally unique public-private partnership facility** – involving multiple entities and companies – to methodically test, break down, and produce different feedstocks will offer North Carolina significant advantage, in particular to speed identification and development of crops most advantageous statewide for biofuels production.

REQUIRED: Legislation and financial commitment of 25 percent of total costs for a \$25 million facility, with that commitment contingent upon the other funding being in place.

MORE INFORMATION provided under *Strategies Delineation*, on page 13.

STRATEGY 8 • Advancing Public Commitment and Workforce Development

To ensure that North Carolinians understand the personal and societal importance of biofuels produced within their State, a **coordinated statewide public endeavor** undertaken by varied parties must in the next five years work for and fund informed leadership, targeted education and workforce development, and consumer awareness.

To be implemented by the *Statewide Biofuels Commission*.

REQUIRED: Legislation and initial funding of \$500,000.

MORE INFORMATION provided under *Strategies Delineation*, on page 13.

STRATEGY 9 • Appropriate and Targeted Incentives

A **comprehensive, dovetailed package** of incentives must be identified and implemented, to maximize development, production, distribution, retail infrastructure, and consumer purchase of biofuels produced within North Carolina.

To be identified, organized, and implemented by the *Statewide Biofuels Commission*, working with its constituted Task Forces and respondents statewide.

REQUIRED: Legislation to be developed.

MORE INFORMATION provided under *Strategies Delineation*, on page 14.

Project Members Statewide: Co-conveners, Steering Committee, and Participants

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

Steering Committee Members

- Michael J. Arnold - Office of the Lieutenant Governor
- Steven Burke - North Carolina Biotechnology Center
- Secretary W. Britt Cobb, Jr. - North Carolina Department of Administration.
Designee: Speros Fleggas
- Secretary James T. Fain, III - North Carolina Department of Commerce.
Designee: Robert K. McMahan, PhD
- James W. Gentry - North Carolina State Grange.
Designee: David Meredith
- Billy Ray Hall - North Carolina Rural Economic Development Center
- Steve Kalland - North Carolina Solar Center
- H. Martin Lancaster - North Carolina Community College System.
Designee: Matt Meyer
- Thomas Nagy - Novozymes North America, Inc.
Designee: Garrett Screws
- Erica Upton Peterson - North Carolina Agribusiness Council, Inc.
- Secretary William Ross - North Carolina Department of Environment and Natural Resources. Designee: Manly Wilder
- Ghasem Shahbazi, PhD - North Carolina A&T State University
- Larry Shirley - State Energy Office
- Robert W. Slocum, Jr. - North Carolina Forestry Association
- Secretary E. Norris Tolson - North Carolina Department of Revenue
- Commissioner Steve Troxler - North Carolina Department of Agriculture & Consumer Services. Designee: Howard Isley
- Ivan Urlaub - North Carolina Sustainable Energy Association
- Larry B. Wooten - North Carolina Farm Bureau Federation.
Designee: Mitch Peele
- Johnny C. Wynne, PhD - North Carolina State University
- Tim Shea - U.S. Army, Fort Bragg

Other Engaged Participants

- Kris Allsbury - BioNetwork - North Carolina Community College System
- J.D. Brooks - BioNetwork-BioAg Center - Robeson Community College
- Katrin Burt - InterSouth Partners
- Rachel Burton - Piedmont Biofuels
- Gerald Cecil, PhD - University of North Carolina at Chapel Hill
- Simon Cobb - Lotus Engineering, Inc.
- Bill Cooper - BioNetwork-BioProcessing Center - Pitt Community College
- Douglas Crawford-Brown, PhD - University of North Carolina at Chapel Hill
- Kurt Creamer - North Carolina Solar Center
- Carol Cutler-White - North Carolina Biotechnology Center
- Richard Dell - Advanced Vehicle Research Center of North Carolina
- Lyle Estill - Piedmont Biofuels
- Tobin Freid - Triangle J Council of Governments
- Anne Gilliam - Southern Alliance for Clean Energy
- Dennis Grady, PhD - Appalachian State University Energy Center
- Billy Guillet - North Carolina Rural Economic Development Center
- Charles Hall - North Carolina Soybean Producers Association
- Gary Harris - North Carolina Petroleum Marketers Association
- Joy Hicks - North Carolina General Assembly, Fiscal Research
- Alex Hobbs, PhD - North Carolina Solar Center
- Nathan Holleman - North Carolina Department of Agriculture & Consumer Services
- Randall Johnson - North Carolina Biotechnology Center
- Leslie Jones - BioNetwork-BioAg Center - Robeson Community College
- Steve Kelley, PhD - North Carolina State University
- Kathleen Kennedy, PhD - North Carolina Biotechnology Center
- Judy Kincaid - Sage Collaboration
- Paul Knott - BioNetwork-BioBusiness Center - Asheville-Buncombe Technical Community College
- Sam Lee - North Carolina Agribusiness Council
- Kristine Leggett - North Carolina General Assembly, Fiscal Research
- Bob Leker - State Energy Office
- Poul Lindergaard - Novozymes North America, Inc.
- Ted Lord - The Golden LEAF Foundation
- Elaine Matthews - North Carolina Rural Economic Development Center
- Andrew McMahan - Central Carolina Community College
- Cynthia McNeill-Moseley - State Energy Office
- Jason R. Nelson - North Carolina Biotechnology Center
- Cedric Pearce, PhD - MycoSynthetix
- Hal Price - Hal Price Biotechnology Consulting Service
- Jeffrey Ramsdell, PhD - Appalachian State University
- Maria Rapoza, PhD - North Carolina Biotechnology Center
- Ben Rich - North Carolina Solar Center
- Christy Russell - North Carolina Biotechnology Center
- Bill Schy, PhD - North Carolina Biotechnology Center
- Paul Sherman - North Carolina Farm Bureau Federation
- Kenneth Swartzel, PhD - North Carolina State University
- Sam Taylor - North Carolina Biosciences Organization
- Anne Tazewell - North Carolina Solar Center
- Mark Thomson - IDEA Engineering, Inc.
- Kristin Walker - North Carolina General Assembly, Fiscal Research

Strategies Delineation

Working productively over just seven months, from September of 2006 through March of 2007, 70 smart and engaged North Carolinians addressed the question at hand:

What combination of vision, policies, and resources is required for North Carolina to develop a liquid biofuels industry that is substantial in output, agriculturally and economically important, sustainable, and significant across the State?

Discussions and ideas were shaped in full Steering Committee meetings and in five Strategic Workgroups: Organizational Leadership; Market Transformation; Science, Research, Development, Feedstocks, and Biomass; Production & Distribution; and Culture & Education. In addition, all participants were asked early in the process to submit their initial roster of ideas, recommended activities, or suggested strategies – to trigger Committee learning and discussion.

Taken in total, the roster of ideas, recommendations, and strategies revealed main areas of necessary attention, yielded a logical framework for action over time, and provided a foundation for the broad strategies.

Key recommendations or ideas underlying the strategies are presented below. *They are representative of the types of outcomes and activities discussed and likely to be seen in coming years; they are not at present assumed to be assured or set.* Considering these and other, to-be-explored, recommendations will be a mandated task of the *Statewide Biofuels Commission* as it works with parties across North Carolina.

The content below reveals:

- The range of resources, policies, and bold ideas required.
- The richness of work and ideas already seen from parties statewide.
- The effectiveness and imagination with which engaged North Carolinians can together think about a topic of societal and economic importance to their future.

Strategy 1 • Realistic Vision and Compelling Public Commitment

Discussion was thoughtful and imaginative about ways to trigger policy, public commitment, and resources over time – and granted that states, like persons, often respond well to large visionary goals over time.

Strategy 2 • Statewide Biofuels Commission

Specific goals and tasks of the commission will include:

- Implementing *North Carolina's Strategic Plan for Biofuels Leadership* and meeting the milestones set forth in legislation/statutes;
- Marketing and promotion;
- Coordinating and advocating research;

- Coordinating and advocating policy;
- Administering grants and cost-sharing programs;
- Aggregating information and serving as a repository for biofuels activities;
- Serving as the lead agency representing North Carolina's interest in federal programs and in seeking federal funding;
- Programming the commercialization of biofuels in North Carolina;
- Addressing related areas of research and attention, including social sciences, consumer issues, broader environmental and energy implications, and economics;
- And others to inevitably evolve in coming years.

The Commission's membership would likely be made up of representatives from the following organizations, as well as from others as appropriate:

- Department of Administration
- Department of Agriculture & Consumer Services
- Department of Commerce
- Department of Environment and Natural Resources
- Department of Transportation
- Energy Policy Council
- Institute of Forest Biotechnology
- North Carolina Agribusiness Council
- North Carolina Biotechnology Center
- North Carolina Board of Science and Technology
- North Carolina Community College System
- North Carolina Farm Bureau Federation
- North Carolina Forestry Association
- North Carolina Rural Economic Development Center
- North Carolina Solar Center
- North Carolina State Grange
- Petroleum Marketers Association
- University of North Carolina
- Representatives of private industry that are engaged in the biofuels industry
- Any other entity that the Biofuels Industry Strategic Plan Steering Committee deems appropriate, particularly entities engaged in the biofuels industry

The five Project Co-conveners, drawing on the Steering Committee and other participants, will move the Commission from Strategy to reality and initial staffing in coming months.

Strategy 3 • Statewide Economic Development Imperatives

The six imperatives laid out were judged requisite to outcomes. Working for them should underlie and inform every policy, activity, and decision over coming years.

Meeting these imperatives is in fact key to the overall success of North Carolina's biofuels strategy.

Strategy 4 • Creation of a New Industry Sector

Guided by policy, leadership, and vision, North Carolina has proven successful at moving from traditional to new industry sectors, many of which spring from merging of technology with varied resources statewide.

The presumption is bold but realistic: groundwork laid in the short-term can lead to a new biofuels sector statewide in the longer-term of 10 to 15 years.

Working for this outcome is also key to the overall, long-term success of North Carolina's biofuels strategy – and must be taken seriously by varied parties and leaders in coming years.

Strategy 5 • A Biofuels Roadmap Across the State

Recommendation: Adopt and implement a roadmap for the commercialization of biofuels in North Carolina. The roadmap is to include a target list of recommended feedstocks that can be efficiently and economically grown, harvested, stored, and processed in North Carolina. The list will identify the best energy source feedstocks and highlight byproducts, outputs, and focus on feedstock quality. It will also include an action plan focusing on North Carolina's regional differences in agronomy and agriculture while also addressing the research and development needs of farmers and scientists.

Strategy 6 • Science, Research, and Development Capabilities

Recommendation: To help facilitate and coordinate research and development efforts throughout the State, the *Statewide Biofuels Commission* shall hold an annual symposium/conference bringing together scientists, researchers, and representatives of universities, government, and other organizations for collaboration, networking, information sharing, and coordination of feedstock and biomass research, development, commercialization, and deployment.

Recommendation: Support and promote the commercialization and deployment of new technologies for converting North Carolina grown and harvested feedstocks and biomass into biofuels.

Recommendation (Revenue Neutral): A key component to a strong biofuels industry is a well-trained workforce. A certification process and quality-assurance training program should be developed for technicians in the biofuels industry. Large-scale and small-scale production facilities can benefit from an integrated biofuels training program. Implementing existing curricula while combining resources to develop a comprehensive training program both reduces cost per student and expands the availability of classes. The biofuels training program should include both production techniques and quality-control testing. Quality control is needed to ensure that the biofuels produced in North Carolina meet all applicable specifications. The quality of the biofuels has a direct relationship to public acceptance. An inconsistent or poor-quality fuel will have a negative impact on the newly developing demand for biofuels.

Recommendation (Revenue Neutral): Develop streamlined environmental review and permitting processes required for development of biofuels production and distribution facilities.

Recommendation: To ensure movement from research and production to distribution and use, develop an ASTM-certified laboratory for testing biofuels, to be implemented by the North Carolina Department of Agriculture & Consumer Services at State testing facilities to allow easy access to testing for producers, particularly small producers, and ensure that all North Carolina-produced biofuels are properly tested and meet established specifications.

Strategy 7 • Advanced Biofuels Acceleration Facility

Recommendation: Endorse Novozymes' proposal to the U.S. Department of Energy for a pilot-scale facility focused on creating viable conversion processes specific to North Carolina and the Southeastern United States. The proposed pilot and deployment facility will develop processes for multiple biomass feedstocks relevant to the State and the Southeastern region; integrate technologies of pretreatment, hydrolysis, fermentation, and enzyme production; and deliver basic engineering and technical guidance for developing regional biorefineries. Novozymes is focused on securing federal, state, and local agreement for the regional biomass-to-ethanol technology center by identifying key partners and creating a governing structure for the facility.

Strategy 8 • Advancing Public Commitment and Workforce Development

Recommendation: Induce use of biofuels within State government by coordinating and/or implementing petroleum displacement programs for all State rolling stock. State government should continue to support biofuels use by going beyond the currently mandated 20 percent reduction or displacement of petroleum use.

Recommendation: Design and implement a pilot marketing program for biofuels targeting a pre-determined region within the State. The pilot program will measure the effectiveness of marketing and outreach methods to ascertain the best approach and practices for reaching a statewide audience.

Recommendation: Identify a county in North Carolina as a pilot/test program for converting all rolling stock to biofuels and environmentally friendly vehicles, including but not limited to E85 and biodiesel.

Recommendation: Endorse the Petroleum Displacement Plan as outlined in *Section 19.5, 2005 State Budget Provision* requiring State fleets to achieve a 20 percent reduction or displacement of current petroleum use by 2010 through the use of alternative fuels and hybrid vehicles.

Recommendation: Determine workforce needs and levels of education – certificate, associate, baccalaureate, or higher – necessary to meet those needs. Involve industry, community colleges, and universities in these determinations and in curricula development. Design and implement workforce development, education, and training curricula with clear, concise, and consistent messages for an array of target audiences.

Key messages of workforce development and training will address biofuels basics, energy issues, and mechanisms for behavior change. Key messages of education will address formal and informal instruction. An integral element of workforce development, education, and training will focus on the coordination and collaboration of existing programs and curricula.

Recommendation: Create a broader presence for North Carolina's biofuels efforts by implementing targeted public awareness and media campaigns. Targeted programs should be designed to take advantage of existing public relations and media efforts in an effort to disseminate accurate information, inform lawmakers, educate the public, and build trust.

Recommendation: Within the *Statewide Biofuels Commission*, designate a strategic committee whose purpose is to elevate, communicate, build, and implement a permanent and ongoing public information plan. The committee would provide periodic updates and reports on the *State of Biofuels in North Carolina* and act as a communications conduit to the General Assembly, other State and local leaders, and to the general public.

Strategy 9 • Appropriate and Targeted Incentives

Recommendation: Implement a comprehensive State-funded incentives program to maximize the development of cost-competitive, bio-based fuels, and to expand production and retail infrastructure. Example incentives include the following:

1. Reduce/remove motor fuels tax on biodiesel;
2. Tax ethanol based on energy content of fuel. Ethanol has approximately 30 percent less energy content than gasoline; therefore, reducing the motor fuels tax on the ethanol blend by 30 percent will be revenue neutral because motorists using E85 need to purchase more fuel to go the same distance as a gasoline-powered vehicle;
3. Expand tax credit for biofuels infrastructure (current 15 percent tax credit is set to expire this year); and
4. Provide a per-gallon payment to North Carolina biofuels producers (e.g. \$0.10 per gallon for the first 10 million gallons of production).

Recommendation: Implement an incentive program for replacing mid-grade octane fuel tanks with E85 at stations across North Carolina. A grant program could supplement the conversion costs incurred by station owners.

Senate Bill 2051, August 2006

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.

Project Coordinators

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