FINAL REPORT OF THE

NORTH CAROLINA UTILITIES COMMISSION

TO

THE STUDY COMMISSION ON THE FUTURE OF ELECTRIC SERVICE IN NORTH CAROLINA

AND

THE ENVIRONMENTAL REVIEW COMMISSION

REGARDING

INVESTIGATION OF VOLUNTARY "GREEN" CHECK-OFF PROGRAM AND OTHER EFFORTS TO STIMULATE RENEWABLE ENERGY PRODUCTION IN THE STATE

March 2003

March 17, 2003

Steven J. Rose, Commission Counsel
Study Commission on the Future of Electric Service
in North Carolina
Legislative Office Building
Raleigh, North Carolina 27611

George Givens, Commission Counsel
Environmental Review Commission
Legislative Office Building
Raleigh, North Carolina 27611

Dear Messrs. Rose and Givens:

The Utilities Commission hereby presents its 2003 final report to the Study Commission on the Future of Electric Service in North Carolina and to the Environmental Review Commission regarding its investigation of a voluntary "green" check-off program and other efforts to stimulate renewable energy production in the State. This final report, which supplements the Commission's 2002 interim report, is being provided pursuant to the Study Commission's request at its January 23, 2001, meeting and the additional request of the North Carolina General Assembly set forth in Section 6 of Session Law 2002-167 (H1215).

As highlighted in this report, the efforts of the Commission and interested stakeholders culminated in the January 2003 approval of a statewide voluntary green pricing plan – NC GreenPower. Now that the initial board of directors has been appointed, implementation and promotion of the program can begin in earnest. Electric consumers will be able to sign up to participate in NC GreenPower this summer.

I understand that you each will distribute copies to the members of your respective Commissions. Thank you for your assistance.

Very truly yours,

Jo Anne Sanford
Chair

JAS/LSW

cc: Robert P. Gruber, Executive Director, Public Staff
The Honorable Roy Cooper, Attorney General
William G. Ross, Jr., Secretary, Department of
Environment and Natural Resources

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Investigation of Voluntary "Green" Check-Off Program; NC GreenPower

In January 2001 the Study Commission on the Future of Electric Service in North Carolina (Study Commission) requested that the North Carolina Utilities Commission (Commission) investigate and make recommendations on the possible creation of a voluntary "green" check-off program.[1] The Commission was requested to investigate potential benefits and costs and to recommend uses for the fund and the amounts of the check-off.

In March 2002, the Commission published and provided to the Study Commission its Interim Report Regarding Investigation of Green and Public Benefit Fund Voluntary Check-Off Programs. In its Interim Report, the Commission informed the Study Commission of its progress and its initiation of Docket No. E-100, Sub 90 to investigate the matter as requested by the Study Commission. The Commission stated that, based upon its investigation, it found considerable benefit in exploring implementation of a statewide voluntary green power program for North Carolina and further found that utility green pricing programs would be more effective than a voluntary check-off program in promoting the development and use of renewable resources. After consulting with counsel for the Study Commission, the Commission deferred further work on voluntary green check-off proposals to allow renewable energy stakeholders to focus on the development of a statewide green pricing program. In its Interim Report, the Commission recommended that the Study Commission (1) recognize the efforts of all parties involved in moving this matter forward, and (2) request that the Commission continue to work with the stakeholders to implement a statewide green power program for North Carolina. Lastly, the Commission stated that it would make a final report to the Study Commission at the conclusion of its efforts in this matter.

[1]The Study Commission further requested that the Commission similarly investigate and make recommendations on the possible creation of a voluntary public benefit fund check-off program. Finding little support for such a program, the Commission, in what it stated it considered to be its final report on this issue, recommended to the Study Commission in March 2002 that it not adopt a voluntary public benefit fund check-off program for North Carolina at that time.

At the request of the Commission, the Advanced Energy Corporation (AEC)[2] facilitated the organization of a Green Power Program Advisory Committee consisting of stakeholders who had shown interest in the green power program in order to reach consensus on an implementation plan for North Carolina. The Advisory Committee includes representatives from the utilities (including North Carolina Electric Membership Corporation and ElectriCities), renewable resource developers, environmental interests, the State Energy Office, and AEC. Soon after the Advisory Committee first met, a group of stakeholders proposed that the green pricing program seek accreditation from a national environmental group. Two nationally-recognized accreditation groups were considered: Center for Resource Solutions (CRS), which had developed the Green-e logo for certification of green power offerings in states with retail choice, and Environmental Resources Trust (ERT), which had experience nationally with the sale of green "tags" to environmentally-conscious commercial and industrial consumers. The stakeholders ultimately agreed to first seek accreditation for the North Carolina green power program through CRS. In working with CRS, an expanded group of North Carolina stakeholders was formed that included representation by additional environmental groups not on the Advisory Committee. A final draft accreditation criteria document was submitted to CRS for approval at the end of May.

On May 31, 2002, AEC filed a proposed program plan for NC GreenPower, a statewide green pricing program for North Carolina developed by the Advisory Committee. At about the same time, the CRS Green Pricing Accreditation Board rejected the proposed North Carolina criteria document. The Board noted that the range of comments on the North Carolina criteria document demonstrated that the North Carolina stakeholder group had additional work to complete in achieving consensus on criteria for the State. Recognizing that considerable disagreement remained among the stakeholders, the Commission requested written comments from interested persons on the proposed green power program and utility tariffs and scheduled public hearings in Raleigh, Greenville, and Asheville for July 2002 to receive comments from public witnesses on the proposal.

To gain additional support for NC GreenPower, AEC revised its proposed program plan to include two distinct products: (1) a "mass-market" product to be accredited by CRS and offered primarily to residential customers, and (2) a "large-volume" product to be accredited by ERT and offered to large-volume customers. The CRS Accreditation Board ultimately approved a final North Carolina criteria document based upon this revised proposal. On November 22, 2002, AEC filed the revised administrative and operational

[2]AEC, originally known as Alternative Energy Corporation, is a non-profit corporation founded by the Commission in 1980 to explore alternative ways of producing electricity and get more work out of the electricity already available. Located in Raleigh, North Carolina, AEC focuses on industrial process technologies, motors and drives testing, and applied building science, with state-of-the-art laboratories in which to do testing and applied research.

plan to implement NC GreenPower, stating that it believed that the revised proposal comes much closer gaining the necessary support of stakeholders for the program. After careful consideration of the proposed plan and allowing interested persons an additional opportunity to file dissenting comments on any aspect of the revised NC GreenPower proposal and utility tariffs, the Commission issued an Order on January 28, 2003, approving NC GreenPower and designating AEC as the program administrator.

NC GreenPower, as approved, will offer two accredited renewable energy products each meeting different needs. The first product, the mass-market product, will be available for purchase by any North Carolina electric consumer for a premium of $4.00 per block of 100 kWh in addition to the consumer's regular monthly electric bill. These blocks of new renewable energy will include a resource mix of solar, wind and methane from biomass delivering power to the North Carolina electric grid. This resource mix has a higher cost of production, which is reflected in the premium for each block, but includes renewable resources that the North Carolina environmental community values most. The second product, a large-volume product, offers a lower cost alternative for large-volume consumers who purchase at least 10,000 kWh (100 blocks) per month. To assist a broader base of renewable energy providers and to allow high volume electricity purchasers to maximize their support of green power, the large-volume product will include a resource mix of solar, wind, small hydro, and all eligible biomass. Both existing and new renewable energy generation will be included in this product in order to reach a target price of $2.50 per block of 100 kWh and to assist existing green power producers who have experienced significant reductions in their utility contracts.

NC GreenPower, formed as a nonprofit subsidiary of AEC, will be governed by a Board of Directors appointed by AEC, the electric utilities, and the Commission. After receiving numerous highly-qualified nominations, the Commission appointed following persons to the Board of NC GreenPower for terms expiring on September 30 of the year indicated:

representing consumer/environmental advocates:

Richard Harkrader (2004),
Cynthia Prince (2004),
Dr. Stephen A. Johnston (2005),
Michael Shore (2005),
William G. Laxton (2006), and
Evelyn Mattern (2006);

representing green power technology:

Stephen S. Kalland (solar, 2004),
William H. Lee (hydro, 2004),
Matthew Meares (wind, 2005),
Timothy M. Beaver (landfill methane, 2005),
Walter Pelletier (poultry waste, 2005),
Garth Boyd (hog waste, 2006), and
Wade Bennett (agricultural/wood waste, 2006).

The Commission appointed Robert H. Goodson, representing North Carolina cooperatives, and Richard Harkrader as Chair and Vice Chair of the NC GreenPower Board of Directors, respectively.

NC GreenPower will "roll out" within the next few months after a public awareness and education campaign. The Commission applauds the considerable effort that has been put into the development of NC GreenPower by the State's utilities, consumer and environmental advocates, and renewable energy providers and looks forward to its successful implementation.

Other Efforts to Stimulate Renewable Energy Production in North Carolina

In October 2002, the General Assembly ratified H1215 (Session Law 2002-167) which generally directs the Commission to identify, in addition to NC GreenPower, other efforts which might be undertaken by the State to stimulate renewable energy production and to include its findings in this final report. To assist in preparing its report, the Commission sought comments and reply comments on the various issues raised by Section 6 of H1215 and subsequently scheduled an informational presentation by the utilities and other parties filing comments. A diverse group of parties participated and filed written comments in this docket, including many of the stakeholders involved with NC GreenPower. All parties in their comments to the Commission agreed that renewable resources must necessarily play an increasingly important role in the State's energy future and in protecting our environment. There was considerable disagreement, however, as to what, if anything, should be undertaken at this time beyond NC GreenPower to stimulate renewable energy production.

Based upon its investigation, the Commission has identified a broad range of ideas regarding actions that could be taken or policies that could be adopted by the State to stimulate renewable energy production. A number of these ideas might be easily implemented; others, however, raise complex issues that are more properly the subject of further study and debate. The Commission, therefore, makes a number of short- and long-term recommendations with regard to actions the General Assembly might take to stimulate renewable energy production in North Carolina.

First, the Commission recommends that the General Assembly continue its support of the voluntary NC GreenPower program. In the short term, there are a number of actions that members of the General Assembly might cause to be taken to support the nascent NC GreenPower effort and help to ensure its success, including: (1) adopt a resolution encouraging State Government, public universities, and the general public to support renewable energy through participation in NC GreenPower; (2) call on Congress to direct or encourage federal agencies and institutions with facilities in North Carolina, such as the Environmental Protection Agency, to participate in NC GreenPower, (3) participate as individual consumers in NC GreenPower through your homes and businesses; (4) personally endorse NC GreenPower and participate in home-district promotion of the statewide renewable energy program; (5) instruct the Department of Commerce to provide information on and encourage participation in NC GreenPower in its business recruitment efforts; (6) adopt tax credits available to residential and business consumers for their support of renewable energy through participation in NC GreenPower; and (7) appropriate funds to support State Government participation in NC GreenPower or to support NC GreenPower directly.

Since NC GreenPower, because of its limited scope, cannot satisfy the potential capacity for renewable energy production in North Carolina, the Commission recommends that the General Assembly additionally study, evaluate, and debate a number of more complex and more controversial policy options suggested by the parties in their comments to this proceeding, such as the adoption of a public benefit fund or a renewable portfolio standard. The Commission, however, specifically does not endorse any of the parties' suggestions and does not recommend that the General Assembly adopt any particular policy option without further study. Beginning this session, the General Assembly might consider taking the following long-term actions with regard to these more complex policy options: (1) stay abreast of federal legislation (comprehensive energy legislation introduced in the last session of Congress proposed a federally mandated renewable portfolio standard, and similar legislation might be introduced in this Congress); (2) commence hearings to engage interested stakeholders in debate about the pros and cons of the policy choices identified in Appendix G; (3) undertake further study to specifically determine the likely impact of the policy choices on taxpayers and energy consumers; and (4) meet periodically with the Commission to discuss the status of renewable energy in North Carolina and for updates on Commission dockets and relevant national events.

Lastly, the Commission notes that a number of suggestions by the parties are subject to being brought before the Commission without further action by the General Assembly. Some of these, such as the inclusion of environmental externalities in cost determinations and the availability of long-term contracts for certain renewable power producers, have been considered by the Commission in the past and rejected, at least in part, for the reasons expressed in the Commission's orders. In addition, the Commission's freedom with regard to others, such as the level of avoided cost rates and the development of interconnection standards, may be limited due to federal preemption or the content of

governing federal law. Still other issues, such as net metering, are the subject of ongoing dockets or periodic review before the Commission. Interested parties are welcome and invited to participate in such proceedings and to offer proposals for consideration by the Commission. The Commission is available at any time to provide the General Assembly with an update on the status of these issues.

In conclusion, the Commission believes that the General Assembly should utilize all reasonable resources to stimulate the appropriate production and use of renewable energy in North Carolina. The Commission is encouraged by the potential for enhanced renewable generation in this State and remains willing to assist the General Assembly in any way possible in this matter.

VOLUNTARY "GREEN" CHECK-OFF PROGRAM

At its meeting on January 23, 2001, the Study Commission on the Future of Electric Service in North Carolina (Study Commission) approved the following motion introduced by Senator Fountain Odom requesting the North Carolina Utilities Commission (Commission) to investigate and report to the Study Commission on the creation of a voluntary "green" check-off program:

> This [Study] Commission requests the North Carolina Utilities Commission to develop recommendations for the creation of a voluntary "green check-off" program whereby retail electricity customers could choose to contribute to a "green check-off" fund. The Commission's investigation should include an assessment of the potential benefits from such a program as well as the costs. The Commission's recommendations should include the amount of the check-off as well as uses for the fund such as issuing grants to be used to build infrastructure, supplement losses, and mitigate start-up costs associated with supplying renewable energy. The Utilities Commission shall report to this [Study] Commission during the 2001-2002 interim of the General Assembly.
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> The Utilities Commission shall provide a copy of its report and recommendations to the Secretary of the Department of Environment and Natural Resources for comments and suggestions to this [Study] Commission during the 2001-2002 interim of the General Assembly.

Initial Commission Inquiry

On February 16, 2001, the Commission issued its Order Initiating Investigation, Requesting Comments, Scheduling Public Hearing, and Requiring Public Notice in Docket No. E-100, Sub 90. To assist in developing recommendations and preparing its report to the Study Commission, the Commission posed eight specific questions regarding the use, benefits, costs, implementation, administration, and solicitation for a "green" check-off program. A diverse group of parties participated and filed written comments in this docket, including the State's electric suppliers, renewable energy advocates and suppliers, and consumer representatives. In addition, a number of consumers filed written statements of position and eleven people testified at a well-attended public hearing in Raleigh held on April 3, 2001.

Based upon the Commission's investigation, it found considerable benefit in exploring implementation of a statewide voluntary green power program for North Carolina. Implementation of a successful green power program will have a positive impact on the environment in North Carolina by increasing the amount of electricity generated by domestic, renewable energy resources and by reducing the amount of electricity generated by the combustion of coal and other fossil fuels. Moreover, the inclusion of hog and poultry

waste-to-energy projects in such a program can provide additional economic and environmental benefits which are unique to North Carolina.

As a part of the Commission's investigation, the Public Staff held several meetings with the utilities and other renewable energy stakeholders. As a result of these meetings and discussions among the parties, Carolina Power & Light Company (CP&L) and Duke Power Company (Duke) separately committed to file green pricing tariffs with the Commission. The Public Staff subsequently informed the Commission that most of the participants at these meetings agreed that the utilities' green pricing tariffs would be more effective than a voluntary check-off program in promoting the development and use of renewable resources. The majority of the participants also agreed that further work on a voluntary check-off program should not continue at that time given the utilities' commitment to file green pricing tariffs, but rather that the participants should engage in discussions and develop recommendations on the identification of renewable resources and the administration of a program that would distribute revenue from the tariffs. After receiving informal feedback from counsel for the Study Commission that the investigation of green pricing tariffs by the Commission would not be inconsistent with the Study Commission's intent, the Commission postponed indefinitely the filing deadlines for further voluntary green check-off proposals to allow the parties to focus on the development of a green pricing program.

At the request of the Commission, the Advanced Energy Corporation (AEC)[1] facilitated the organization of a Green Power Program Advisory Committee consisting of interested stakeholders in order to reach consensus on an implementation plan for North Carolina. Simultaneously, AEC and the stakeholders began working with the Center for Resource Solutions (CRS) and Environmental Resources Trust (ERT) on developing criteria for national certification of North Carolina's green power program. In deference to the progress being made by AEC and the stakeholder group, the Commission extended the deadline for the utilities to file their green pricing tariffs from December 31, 2001, until April 1, 2002.

In March 2002, the Commission published and provided to the Study Commission its Interim Report Regarding Investigation of Green and Public Benefit Fund Voluntary Check-Off Programs. In its Interim Report, the Commission informed the Study Commission of its progress in this matter and recommended that the Study Commission (1) recognize the efforts of all parties involved in moving this matter forward, and

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(2) request that the Commission continue to work with the stakeholders to implement a statewide green power program for North Carolina. The Commission further indicated that it did not believe that any additional legislation would be required for implementation of such a program. Lastly, the Commission stated that it would make a final report to the Study Commission at the conclusion of its efforts in this matter.

Collaborative Stakeholder Process

The Green Power Program Advisory Committee organized by AEC first met on October 5, 2001. The Advisory Committee consists of stakeholders who at that time had shown interest in the green power program, including representatives from the utilities (including the North Carolina Electric Membership Corporation (NCEMC) and ElectriCities of North Carolina, Inc.), renewable resource developers (small hydroelectric, landfill methane, hog and wood waste), environmental interests, the State Energy Office, and AEC. Staff members from the Commission, the Public Staff, and the Attorney General were invited to attend the Advisory Committee meetings as observers. The Advisory Committee was subsequently expanded to include representation from wind, solar, and poultry waste generation and an observer from the U.S. Environmental Protection Agency. All meetings have been open to the public to attend. After its initial meeting, the full Advisory Committee met once more in 2001– December 17 – and five times in 2002 – March 19, April 16, May 21, September 12, and October 4. In addition, subcommittees and working groups were formed and met separately almost monthly to discuss policy, marketing, and supply/technical issues and to bring recommendations back to the full Advisory Committee.

Soon after the Advisory Committee first met, a group of stakeholders proposed that the green pricing program seek accreditation from a national environmental group. Such accreditation would allow environmental groups to participate in the development of criteria against which the green power program would be judged, would provide them "ownership" in the process, and would serve as a "Good Housekeeping" stamp of approval for the program. In addition, accreditation by a third party would allow subsequent verification that the resources accepted by the program were truly "green" and that the program was purchasing sufficient power to meet the participants' energy requirements. It was recognized, however, that the proposed green power program was intended to accommodate North Carolina's consumers and North Carolina's renewable resources and that accreditation by a national organization with other interests and goals might not be achievable.

Two nationally-recognized accreditation groups were considered: CRS, which had developed the Green-e logo for certification of green power offerings in states with retail choice, and ERT, which had experience nationally with the sale of green "tags" to environmentally-conscious commercial and industrial consumers. Representatives of each were invited to a workshop on January 14, 2002, and to a meeting of the Policy Subcommittee of the Advisory Committee on January 15, 2002. The purpose of the workshop, sponsored by the North Carolina Solar Center and the State Energy Office, was

to educate stakeholders on the key issues associated with a green electricity accreditation program and to provide a forum for technical questions to assist in creating the best possible program for North Carolina.

The stakeholders ultimately agreed to first seek accreditation for the North Carolina green power program through CRS. In working with CRS, an expanded group of North Carolina stakeholders was formed that included representation by additional environmental groups not on the Advisory Committee. Starting with a minimum national threshold, this stakeholder group sought to reach consensus on a North Carolina specific criteria document which would be applied to any green power program eventually proposed in this State, including the statewide program being developed by the Advisory Committee.

The North Carolina green pricing accreditation stakeholder group first met with CRS in Raleigh on February 19, 2002. Hoping to build on the substantial work already done by the Advisory Committee, CRS initially proposed to complete development of a final North Carolina criteria document by the end of March. Key issues discussed during the accreditation meetings included, for example: what types of renewable resources would be eligible to participate in the green power program; what forms of biomass would be considered “green”; whether there would be emissions criteria for combustion facilities; whether co-firing with fossil fuels would be allowed; whether the participating facilities would be required to be located within the State; whether existing facilities would be allowed to participate; the true-up period to be established for reconciling sales and generation; and how the program would address full subscription. Not meeting its optimistic original timeline, the accreditation group met four additional times during March and May 2002. An initial draft criteria document was circulated in April and a final draft was submitted to CRS for approval at the end of May.

During this time, the Advisory Committee and its subcommittees continued to meet to develop a proposed green pricing plan for North Carolina. To ensure that sufficient progress continued to be made, the Commission had extended the time for the utilities to file green pricing tariffs only from April 1, 2002, to June 1, 2002. On May 31, 2002, AEC filed a proposed program plan for NC GreenPower, a statewide green pricing program for North Carolina. On that same day, CP&L, Duke, Dominion North Carolina Power (Dominion), and four electric membership corporations (EMCs) — Four County EMC, Piedmont EMC, Randolph EMC, and TriCounty EMC — each filed green power tariffs supporting the implementation of NC GreenPower. Two additional cooperatives, Brunswick EMC and Wake EMC, filed tariffs on June 3, 2002. Recognizing that considerable disagreement remained among the stakeholders, the Commission requested written comments from interested persons on the proposed green power program and utility tariffs and scheduled public hearings at three locations across the State to receive comments from public witnesses on the proposal.

At about the same time, the CRS Green Pricing Accreditation Board, which met twice in late May and early June 2002, rejected the proposed North Carolina criteria document. The Board noted that the range of comments on the North Carolina criteria document demonstrated that the North Carolina stakeholder group had additional work to complete in achieving consensus on criteria for the State. The Board indicated that it would look to see significantly greater consensus in support of the final proposed criteria. Similar comments were received by the Commission in writing and at the Raleigh, Greenville, and Asheville public hearings held in July 2002.

On September 10, 2002, the Public Staff requested that the Commission defer ruling on the green power programs and tariffs filed on May 31, 2002, noting that further meetings were taking place among the parties in September and early October. Moreover, the Public Staff stated that the parties were continuing to explore the best structure for NC GreenPower so that it could be accredited and attract maximum participation.

To gain additional support for NC GreenPower, AEC revised its proposed program plan to include two distinct products: (1) a "mass-market" product to be offered primarily to residential customers that is comprised of higher-priced renewable resources, and (2) a "large-volume" product to be offered to large-volume customers that is more price competitive in comparison to out-of-state green tags. In addition, AEC proposed to separately seek accreditation of the mass-market product through CRS and the large-volume product through ERT. This revised proposal was presented to the Advisory Committee at its September 12, 2002, meeting and to the accreditation stakeholders on October 4, 2002. As a result of this revised proposal, the CRS Accreditation Board approved a final North Carolina criteria document. (Criteria document, attached as Appendix A.)

On November 22, 2002, AEC filed the revised administrative and operational plan to implement NC GreenPower. (Program plan, attached as Appendix B.) CP&L, Duke, and Dominion, in addition to several of the State's electric membership cooperatives, filed revised green power pricing tariffs to support the implementation of NC GreenPower. AEC stated that the revised proposal attempts to balance the interests of all stakeholders by narrowing the types of renewable resources included in the mass-market product while incorporating a broader spectrum of resources in the lower-cost large-volume product. AEC further stated that although no single interest or representative group may be completely satisfied with the revised plan, it believed that the revised proposal comes much closer than the initial May 31, 2002, filing to gaining the necessary support for the program. AEC, however, noted that at least one issue, that of the use of wood waste in the large-volume product, remained contentious. The Commission, therefore, allowed interested persons until December 31, 2002, within which to file dissenting comments on any aspect of the revised NC GreenPower proposal and utility tariffs.

Of the five comments received in response to the Commission's December 11, 2002, Order, three expressed support for the inclusion of biomass and waste wood energy

facilities in the NC GreenPower proposal. The two remaining comments were filed by Hydromatrix Partnership Limited, a hydropower developer, and Appalachian Voices, an environmental advocacy group. Among its comments, Appalachian Voices reiterated (1) its earlier-stated concern that NC GreenPower did not address energy efficiency or energy conservation and (2) its opposition to the development of hydropower and the inclusion of municipal solid waste, animal waste, or biomass incineration projects in NC GreenPower. Hydromatrix, on the other hand, objected to the limitations proposed for hydroelectric facilities and the requirement that they be subject to the standards of the Low Impact Hydro Institute.

After careful consideration of the proposed plan and the comments subsequently received, the Commission issued an Order on January 28, 2003, approving NC GreenPower. (January Order, attached as Appendix C.) With regard to many of the concerns raised by Hydromatrix and Appalachian Voices, the Commission noted in the January Order that NC GreenPower is designed as a market-driven product in response to a perceived consumer demand. This has affected not only the prices set for the mass-market and large-volume products, the premiums expected to be paid to generators using different technologies, and the terms offered to renewable generators, but also other characteristics which distinguish the two products, such as the accreditation of each and the renewable resources included within each. The Commission stated that these distinctions between the two products represent a carefully crafted balance among the diverse stakeholder interests participating in the development of the proposal. The Commission, therefore, approved the revised NC GreenPower proposal, allowed the associated utility tariffs to become effective as proposed, and designated AEC as the program administrator. The Commission stated that it respects the considerable consensus achieved through the stakeholder process and will allow the market for NC GreenPower and renewable generation to develop under the proposal as filed. Lastly, the Commission noted that experience marketing the program and working with both consumers and generators will indicate where changes, if any, should be brought back before the Commission to be incorporated into NC GreenPower.

NC GreenPower

NC GreenPower, the statewide green pricing plan approved by the Commission, was developed, in part, to increase the amount of electricity generated in North Carolina by renewable resources. As compared with electricity generated from traditional utility plants, green power, or electricity generated with renewable resources, is preferred by many because it results in lower or no air pollution. Different regions of the country have adopted different definitions for green power, with most including a combination of renewable power resources. North Carolina's green power program includes solar, wind, small hydro (less than 10 MW), and biomass as eligible renewable energy resources.

NC GreenPower will enable the development of multiple types of renewable energy in North Carolina. Initially, the mix of renewable resources used in the program will consist

largely of biomass (wood waste), landfill gas (methane), and small hydro. These resources are readily available and plentiful, and the facilities to utilize them can be constructed fairly quickly and less expensively than solar or wind sources. However, AEC expects to see growth in the construction of solar (photovoltaic) and wind generation sources soon after NC GreenPower is implemented. Small-scale hydro and micro-hydro facilities also will be included in NC GreenPower, but only those that have met all of the environmental and licensing requirements set by the appropriate government agencies. In any case, no new dams or other impoundments will be built to provide hydro power for the program.

With regard to the use of biomass, or organic material, to generate electricity, the North Carolina stakeholders wanted to ensure that the sources were limited to true waste products in order to provide the dual benefits of producing green electricity and reducing waste that would otherwise be sent to landfills. Thus, any participating facility utilizing wood waste, for example, to produce electricity would be limited to the use of construction debris, old pallets and crates, sawdust, bark chips, and other waste products. While the burning of any organic material results in some air emissions, all of these fuels result in the release of substantially lower levels of greenhouse gases into the atmosphere than traditional fossil fuels. Animal manure and bedding, another type of biomass, will be either combusted in an advanced furnace, composted to produce methane gas, or chemically converted into ethanol (alcohol). In this way, potentially dangerous waste products are either burned directly or first converted to a gas or liquid fuel to be burned later, removing them from the waste stream while providing fuel for generating electricity. No animal carcasses would be used in any of these processes.

NC GreenPower will offer two accredited renewable energy products – a mass-market product and a large-volume product – each meeting different needs. The first product, the mass-market product, will be available for purchase by any North Carolina electric consumer for a premium of $4.00 per block of 100 kWh in addition to the consumer's regular monthly electric bill. These blocks of new renewable energy will include a resource mix of solar, wind and methane from biomass delivering power to the North Carolina electric grid. This resource mix has a higher cost of production, which is reflected in the premium for each block, but includes renewable resources that the North Carolina environmental community values most. The accreditation of this product through CRS will provide assurance to the consumer that the blocks of energy purchased through NC GreenPower is new, green, and composed of these resources.

The second product, a large-volume product, offers a lower cost alternative for large-volume consumers who purchase at least 10,000 kWh (100 blocks) per month. To assist a broader base of renewable energy providers and to allow high volume electricity purchasers to maximize their support of green power, the large-volume product will include a resource mix of solar, wind, small hydro, and all eligible biomass. Both existing and new renewable energy generation will be included in this product in order to reach a target price of $2.50 per block of 100 kWh and to assist existing green power producers who have experienced significant reductions in their utility contracts. NC GreenPower will seek

certification for the large-volume product from ERT to provide consumer confidence in the product's green status. A large-volume customer would have to agree to a one-year contract minimum to qualify to purchase the large-volume product.

The premium for each block of green power is necessary because, for a number of reasons, it is more expensive today to produce electricity with renewable resources than it is with conventional fossil fuel or nuclear power plants. By supporting renewable power projects with their purchase of one or more blocks per month from NC GreenPower, consumers can provide the incentives needed to support renewable energy research and bring more renewable energy sources on line. All of the money received from consumer premiums will be used to directly support the NC GreenPower program, with all profits used to pay a premium to those individuals or companies that generate the green power. Eventually, as more green power sources are developed, the cost for these renewable energy supplies will be reduced enough to compete economically with traditional sources.

In approving NC GreenPower, the Commission designated AEC as the program administrator. AEC has formed a separate nonprofit entity named NC GreenPower, which will be governed by a Board of Directors comprised of the following 22 members:

- Six (6) consumer/environmental advocates,
- Seven (7) members representing green power technologies,
- Five (5) members representing North Carolina utilities,
- Two (2) public members of AEC's Board of Directors,
- The President of AEC, and
- The Director of the North Carolina State Energy Office.

The green power technology and consumer/environmental advocacy members will be appointed by the Commission for three-year terms on a staggered schedule. After receiving numerous highly-qualified nominations, the Commission appointed the green power technology and consumer/ environmental advocacy members and designated the initial Chair and Vice-Chair of the Board by Order dated March 11, 2003. (March Order, attached as Appendix D.)

NC GreenPower will "roll out" within the next few months after a public awareness and education campaign. This education effort will be coordinated with the North Carolina utilities' notification to their residential and non-residential customers of when and how participation is available.

Conclusions

As a result of its investigation of a voluntary check-off program to support green power, the Commission approved NC GreenPower, a nationally-accredited statewide green pricing plan available to all electric consumers in the State. As described above, NC GreenPower should facilitate increased renewable energy development in North

Carolina through voluntary consumer premium payments and provide new opportunities for waste-to-energy projects utilizing animal waste and other biomass as well as solar and wind energy projects. The Commission applauds the considerable effort that has been put into the development of NC GreenPower by the State's utilities, consumer and environmental advocates, and renewable energy providers and looks forward to its successful implementation.

OTHER EFFORTS TO STIMULATE RENEWABLE ENERGY PRODUCTION IN THE STATE

In October 2002, the General Assembly ratified H1215 (Session Law 2002-167) which generally directs the Commission to identify, in addition to NC GreenPower, other efforts which might be undertaken by the State to stimulate renewable energy production and to include its findings in this final report. Specifically, Section 6 of H1215 provides as follows:

> SECTION 6.(a) The North Carolina Utilities Commission shall include the following additional items in the study it is presently conducting for the Commission on the Future of Electric Service in North Carolina referred to as "Investigation of Green Power and Public Benefit Fund Voluntary Check-Off Programs":
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> (1) Identification of funding mechanisms in addition to voluntary purchase of green power blocks that would stimulate green power production in the State.
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> (2) Identification of incentives in addition to funding mechanisms that would stimulate green power production in the State.
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> (3) Identification of barriers that would impede green power production in the State and strategies to address those barriers.
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> (4) Identification of appropriate methods of promoting the purchase of green power by the various electric customer groups.
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> (5) Identification of methods whereby the State can provide incentives and resources that would stimulate the production and use of green power that would protect water quality; promote water conservation and water reuse; protect air quality; protect public health, safety, welfare, and the environment; and provide for the safe and efficient disposal of animal waste in the State.
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> SECTION 6.(b) In making recommendations to address the additional items listed in subsection (a) of this section, the North Carolina Utilities Commission shall consider the impact of its recommendations on residential, commercial, and industrial consumers of electricity in the State.
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> SECTION 6.(c) The North Carolina Utilities Commission shall make its final report on its investigation of green power and public benefit fund voluntary check-off programs, including the additional items set forth in subsection (a) of this section, to the Commission on the Future of Electric Service in North Carolina and the Environmental Review Commission not later than 15 March 2003. The delivery of this report shall not preclude either of the receiving commissions from asking for additional information or reports on these subjects.

To assist in preparing its report, the Commission sought comments and reply comments on the various issues raised by Section 6 of H1215. (October Order, attached as Appendix E.) On December 10, 2002, the Commission scheduled an informational presentation by the utilities and other parties filing comments and extended the deadline for the filing of initial comments due to December's adverse weather. (December Order, attached as Appendix F.)

On or about December 20, 2002, initial comments were filed by Carolina Power & Light Company (CP&L), Duke Power Company (Duke), Carolina Utility Customers Association, Inc. (CUCA), Carolina Industrial Groups for Fair Utility Rates (CIGFUR), Appalachian Voices, the North Carolina Sustainable Energy Association (NCSEA), and the State Energy Office. Reply comments were filed on or about January 15, 2003, by CP&L, Duke, Dominion North Carolina Power (Dominion), CUCA, CIGFUR, the Attorney General, and the Public Staff. Representatives of CP&L, Duke, Dominion, NCSEA, the State Energy Office, the Attorney General, and Craven County Wood Energy appeared and spoke at the informational presentation on January 27, 2003, generally providing further explanation of their written comments and responding to questions by the Commissioners. Craven County Wood Energy subsequently filed a copy of its comments in writing for the record. Copies of the parties' filed comments are available from the Commission's Chief Clerk or from the Commission's Internet web site (http://www.ncuc.net).

Summary of Public Comments

In its initial comments, CP&L noted that electricity from alternative, "green" sources costs more than that from more traditional sources available to CP&L and its body of customers. With regard to most of the issues raised in H1215, CP&L stated its belief that they are premature. Rather, the recently proposed NC GreenPower program should first be implemented and its effectiveness in stimulating green power production in the State evaluated over a reasonable period of time before determining the need for additional funding or incentives for green power. CP&L stated that NC GreenPower provides a funding mechanism for green power by allowing customers to voluntarily pay an additional charge to support the development of green power resources in North Carolina. Aside from voluntary purchases, the most often-mentioned alternative funding sources for green power are mandatory surcharges on all electric customers and/or taxpayer funded subsidies. With regard to incentives, CP&L noted, citing a September 2002 report by the National Renewable Energy Laboratory ("Case Studies on the Effectiveness of State Financial Incentives for Renewable Energy"), that North Carolina already offers numerous financial incentives for renewable energy, including personal tax incentives, corporate tax incentives, property tax exemptions, loans, and industrial recruitment. According to that report, only three states (New York, Montana, and Minnesota) offer more categories of financial incentives. Federal incentives are also available to support green resources. CP&L further stated that the main obstacle to additional green power production is its inherently higher cost. NC GreenPower addresses that barrier by allowing consumers to voluntarily pay an incremental charge to fund the development of green resources. This

approach has the added benefit of ensuring that green power production in the State will grow at a pace commensurate with the consuming public's interest in and willingness to buy the product. CP&L noted that the marketing and promotion of green power will be an integral part of the implementation of NC GreenPower. The Advisory Committee organized by AEC has already established a marketing subcommittee for NC GreenPower. Marketing and promotion of green power should be left to the NC GreenPower Board and the marketing subcommittee as they plan for implementation of NC GreenPower. Lastly, CP&L stated that NC GreenPower will offer a subsidy to green power producers (including the principally-targeted solar, wind, small hydroelectric, and biomass resources) in addition to the already generous State and Federal incentives. This diverse resource mix will provide a well-balanced approach to protecting the State's water and air quality; protecting the environment and the health, safety, and welfare of the public; and encouraging power production by means that will safely and efficiently dispose of animal waste. Once NC GreenPower is fully implemented and the results evaluated, North Carolina may find that no further incentives are appropriate.

Duke, in its initial comments, also stated that the voluntary NC GreenPower program will facilitate the production and use of green power in North Carolina. One funding mechanism the State could consider would be that of becoming an active participant in NC GreenPower and using a portion of the resources set aside for current or future energy and environmental uses to purchase "blocks" of green power through NC GreenPower for State facilities. Duke further stated that the use of the Clean Water Management Trust Fund to support the development of alternative energy resources that would improve water quality is an idea that deserves further consideration by the General Assembly. With regard to additional incentives, Duke suggested that consideration be given to the use of tax credits and/or tax incentives to promote the development of green power, noting that such incentives are used in other states. In addition, public recognition by state officials, such as awards to businesses or individuals, could be an additional incentive for participation in NC GreenPower. Additional incentives used by other states to promote green power include: (1) Renewable Energy Systems Exemption, where added value to any property from installation of a qualifying renewable energy system is not included in the assessment of the property's value for property tax purpose (Oregon and several other states); (2) Low-interest Loans for Renewable Energy Resource Program, where funds are made available at a low interest rate with repayment over a 5 year period (Idaho, Montana); and (3) Renewable Energy Grant Program, where grants funded with petroleum violation escrow funds are available through the state public service commission (Kansas). Duke echoed the comments of CP&L that the most significant potential barrier to green power production is cost. The cost of green technology resources is generally significantly higher than the cost of traditional sources of generation. NC GreenPower addresses the cost barrier by providing a source of additional funds for qualified green power producers. With regard to marketing and promotion, Duke noted that a statewide marketing effort is being developed for NC GreenPower. Lastly, Duke noted that any actions to provide incentives for or to remove barriers to the development of green power that result in the cost of service being higher than it would otherwise be in the absence of

such incentives may ultimately cause electricity rates to increase for residential, commercial and industrial customers. By implementing voluntary incentive mechanisms, such as NC GreenPower, residential, commercial and industrial consumers of electricity in the State will only be impacted if they choose to purchase “blocks” of green energy from the program.

CUCA, an association comprised of more than 50 of North Carolina’s largest industrial customers, noted in its initial comments that its members are now bearing the significant cost burden of the Clean Smokestacks Act, S1078, through the base rate freeze imposed to pay for clean air environmental compliance costs. Like CP&L, CUCA stated its belief that current programs such as NC GreenPower and the Clean Smokestacks Act should be given an adequate opportunity to work before considering whether to further burden consumers with additional potentially costly environmental programs.

CIGFUR, whose members are manufacturers of various commodities including paper products, chemicals, and consumer goods, stated in its initial comments that North Carolina should be very cautious at this time about adopting programs that would further increase the price of electricity without demonstrable, offsetting benefits. North Carolina and the nation are suffering through tough economic times. Private industry has suffered from the dramatic economic downturn in 2001 and 2002, and State government is reeling from huge deficits. Any recommendations to fund or promote green power programs through increases in electric rates would cause all customer classes to have to pay more for an essential commodity during an economic downturn, but would hit high-volume purchasers the hardest. Since North Carolinians already pay a higher average price across customer sectors than regional neighbors pay, stated CIGFUR, increased rates would exacerbate the competitive disadvantage of North Carolina industry vis-à-vis regional competitors and would likely create competitive disadvantages vis-à-vis national and global competitors as well. CIGFUR noted that North Carolina has already committed, through the “Clean Smokestacks” legislation, to spend more than $2 billion to reduce nitrogen oxide and sulfur dioxide emissions from coal-fired generating plants operated in North Carolina by CP&L and Duke, 70% of which will be paid by the utilities’ customers over 5 years through frozen rates. This is an enormous expenditure that should be recognized as the major component of State energy policy for the next several years. CIGFUR recommended, as did other commenters, that NC GreenPower, which will use market forces and voluntary public participation to expand the use of green power in the State, be given a chance to work before mandatory and potentially conflicting programs are considered.

Appalachian Voices stated, in its initial comments, that it fully supports the development and implementation of an environmentally responsible “alternative energy’’ subsidy program in North Carolina; however, such a program must, to the fullest extent practicable, favor efforts to improve conservation and efficiency over the development of increased electricity generating capacity. Appalachian Voices focused the bulk of its comments on the impact of various “green” energy sources on the environment,

contending that the only energy sources that should be used for power generation in North Carolina in the long term are solar and wind. Hydroelectric power that meets the requirements of the Low Impact Hydropower Institute, landfill gas, and gasification of animal waste are also acceptable, in Appalachian Voices' view, during the transition to solar and wind generation. No other generation sources, according to Appalachian Voices, should be used in either the short term or long term. In conclusion, Appalachian Voices strongly recommended that the State develop an aggressive public benefits fund (PBF). In fulfilling the legislative goals to "protect water quality; promote water conservation and water reuse; protect air quality; protect public health, safety, welfare, and the environment; and provide for the safe and efficient disposal of animal waste in the State," funds generated under the PBF that are earmarked for developing alternative energy sources should, to the fullest extent practicable, be devoted to promoting conservation, efficiency, solar power and wind energy. Since the public will be subsidizing the PBF, it is critically important to develop appropriate alternative energy sources with their hard-earned dollars.

In its initial comments, which were endorsed by Enerdyne Power Systems, Inc., a landfill gas developer, NCSEA set forth a number of ideas and recommendations responsive to the legislature's request. First, NCSEA stated that it strongly supports increasing North Carolina's renewable energy production from around 1 percent to above 10 percent in the coming 10 years. NCSEA noted that the resultant diversity in the generation portfolio will reduce energy price volatility and mitigate security risks posed by both central station generation and constrained fuel delivery systems, while at the same time creating new, high technology energy businesses, skilled jobs and a cleaner environment. In order to do this, however, North Carolina must create numerous incentives and remove barriers. NCSEA expressed concern that current energy production in North Carolina relies almost exclusively on old-fashioned, centralized generation technologies, largely because of a self-reinforcing decision-making process where previous investments and experience lead to daily choices that discourage new ideas and progressive behavior in the generation sector. North Carolina decision-makers have recognized this problem before and have offered two efforts to address it: state tax credits for renewable energy development and a proposed voluntary ''green power'' purchasing program. Unfortunately each of these responses is limited in its potential impact, and even combined are insufficient to overcome the entrenched economic interests that perpetuate the old energy generation model. NCSEA Stated that in order to get renewable energy production on a scale large enough to significantly diversify our generation mix, to be a high-technology driver for our state economy, and to clean our environment, new businesses are going to need many kinds of assistance in addition to state tax credits and NC GreenPower. Such incentives might include competitive demonstration grants, <u>significant</u> public education campaigns, business development assistance, and performance-based incentives. The most common tried and reliable source of funding for such incentives is a PBF – a non-bypassable charge applied equally to all customers. Such a charge, stated NCSEA, would be competitively neutral and not compete with voluntary programs like NC GreenPower. NCSEA proposed that the funds generated by the PBF be used (1) to support renewable energy and energy research and development (along with energy efficiency and low-

income customer assistance programs) historically supported, but now scaled back, by many utilities, and (2) to replace funds for programs previously supported by oil overcharge funds. NCSEA suggested that a PBF charge not be restricted to electricity but should also include natural gas and possibly transportation fuels.

NCSEA further stated in its initial comments that the most critical non-financial incentive that could be provided to developers of distributed renewable energy technologies is a sophisticated public education and awareness campaign run by an entity with a vested interest in green power development. Emerging technologies such as methane from animal waste and solar photovoltaics (PV) need continued technical assistance and the experience available from numerous demonstration projects. Incentives for these investments could come from a PBF. In addition, a simple incentive for small hydropower, landfill gas methane, and wind power generators would be more realistic "avoided cost'' contracts and a revitalized integrated resource planning (IRP) process that better captured negative environmental externalities in the existing generation sector as well as some of the non-traditional benefits of diversified, distributed resources. To be realistic the "avoided cost'' would have to include the so-called externalities and the economic benefits to the transmission and distribution system of widespread distributed generation. The environmental and health costs of fossil and nuclear generation – toxic emissions and wastes, greenhouse gases as well as extreme water demands – must be included in a true cost of electrical generation. Also, avoided cost contracts must be based on long-term contracts of a minimum 15 years so that suppliers can get financing for projects. For new technologies to enter the State's energy marketplace, incentives and policies are needed that provide sufficient momentum to new technology entrants to overcome the ''path dependent'' market and policy structure that gives great advantage to existing energy technologies. Incentives can help to create a market, but some barriers to entry are so fundamental that even robust financial and technical assistance are not sufficient to create the needed momentum to move renewable energy into the market. Some of the most difficult existing barriers include: (1) the lack of simplied contractual agreements and simple, consistent rules for interconnecting very small to middle-size renewable generators to the electrical grid; (2) the absence of simplified ''net metering" procedures and contracts between electric utilities and very small renewable generators; (3) the need for more market opportunities for selling renewable-generated electricity, such as a renewable portfolio standard (RPS); (4) the need for contract guarantees to suppliers to NC GreenPower and other renewable energy generators to facilitate long-term financing; (5) the current restrictive interpretation by the State Attorney General 's office of the NC Ridge Law with respect to wind development; and (6) the lack of education and awareness about the availability and efficacy of renewable energy technologies for energy production. In the near term, marketing the NC GreenPower program is one of the best ways to promote renewable energy purchases by North Carolina utility customers. NCSEA further stated that if State policy makers want to see this program succeed, they should insist that the State's electric utilities, who stand to gain volumes of positive press from such a public relations and marketing campaign, contribute to the initial marketing expenses needed to promote the program. Another way to promote NC GreenPower in the

near term is for the State to lead by example. Since NC GreenPower will be demand-driven, the State, as well as public and private universities, and industrial, commercial and residential customers all can play a positive role by purchasing NC GreenPower for a significant percentage of their electricity use. A third option for promotion of green power is to expand the research, extension and outreach programs of State renewable energy entities at our universities and other nonprofit organizations.

Lastly, NCSEA noted in its initial comments that renewable energy production using North Carolina's indigenous fuel resources can help solve many serious air and water quality problems while reducing greenhouse gas emissions and at the same time water consumption, particularly in the State's agricultural sector. Farmers and agribusiness industries have several advantages that make them prime candidates for renewable energy generation. First, farmers and forestry interests naturally create renewable fuels in the course of raising livestock (biogas) or separating product from crop waste (biomass). Second, farmers are familiar with generating equipment and its use for emergency backup power. Third, farms and agribusiness processing are usually located in EMC territory. NCSEA further noted that NC GreenPower, even if successful when compared to similar programs around the country, is not large enough to drive development of even one-quarter of the State's biomass potential. Therefore, additional options are needed to take advantage of the State's biomass resource to displace coal and nuclear power from the grid mix. One way to capture the additional ''public good'' value of these resources would be to make agricultural-based renewable generation competitive at the avoided cost rate by using PBF funding. Such funding could be used to build demonstration projects with the goal of lowering costs by reducing risks, to buy down the capital costs of farm based generation, or to provide research money and create opportunities for renewable energy based combined heat and power (CHP) to lower costs of investment and operation. Another alternative would be to create a North Carolina RPS with an in-state generation requirement and significant penalty for non-compliance. Since various forms of biomass energy are likely to be among the lowest cost options in North Carolina to satisfy an RPS requirement, this would make utility investment in biomass projects attractive.

The State Energy Office, in its initial comments, applauded the Commission and the Public Staff for their leadership and foresight in encouraging the development of NC GreenPower. Unfortunately, NC GreenPower will have a limited effect on the overall development of renewable energy in North Carolina because the amount of power likely to be purchased by our citizens, businesses and governmental agencies will be relatively small – less, in fact, that the minimum amount of production expected from North Carolina's first major wind farm or a future animal waste-to-energy plant. Therefore, stated the State Energy Office, other funding and financial mechanisms must be found to assist renewable technologies if they are to successfully enter the North Carolina electricity market. The State Energy Office noted that the two mechanisms being utilized by 21 and 10 other states, respectively, to spur development are a PBF and an RPS. Sometimes those mechanisms are used simultaneously and in parallel, since each has different strengths and benefits, while some states have chosen just to pursue one of two

mechanisms. The State Energy Office recommended that these options should continue to be studied and evaluated for use in North Carolina to ensure that all of our appropriate renewable resources are developed while building a strong statewide program in energy efficiency and protecting the energy needs of our most vulnerable and burdened low-income energy consumers, but noted that more intensive review of the success and failure of both mechanisms in the states where they now operate is needed before these strategies should be adopted as the proper path for our State to undertake on behalf of its citizens. Other funding mechanisms and vehicles should also be explored for the purpose of financing energy efficiency, renewable energy and low-income energy measures in our State.

The State Energy Office further noted in its initial comments that a statewide PBF could provide funding through a small wires charge to electric customers for a wide variety of programs, including renewable technologies, energy efficiency, and low-income programs. As part of this effort, rebates can be provided from the fund to individuals and companies investing in renewable energy systems (these could cover a percentage of the cost of systems or be based on power output). Funds could also be made available as low interest loans to support installations, including demonstrations of animal waste-to-energy projects and wind farms, as well as solar energy systems on schools and other high profile facilities. Some funds would likely be dedicated to research and development needs specific to North Carolina, such as animal waste-to-energy projects which the U.S. Department of Energy has clearly stated is a “state” concern and not of national interest to the DOE biomass programs. The State Energy Office noted that the average PBF surcharge is 1.57 mills per kilowatt-hour. To reduce the impact on electric ratepayers, consideration could be given to spreading these charges to natural gas customers as well. With regard to incentives, an RPS, as has been implemented in a number of other states, would require that a certain percentage of the electricity sold in North Carolina be generated by renewable energy resources. The State Energy Office noted that one major barrier to the stimulation of green power production in North Carolina is the lack of a net metering rule that would apply statewide. Net metering rules provide clear guidance to individuals so they understand the monetary value of the power they produce and do not have to negotiate a price with their utility. A second obstacle cited by the State Energy Office is the lack of statewide interconnection standards. Clear interconnection standards would allow green energy systems in North Carolina to be designed to meet one hardware and liability standard common to all utilities in the state. Third, the State Energy Office identified the Mountain Ridge Protection Act of 1983 as an impediment to siting wind power generation on ridges where the highest power winds occur. With regard to marketing and promotion of green power technologies, the State Energy Office noted that support by all levels of State government and the university system would encourage green power use and promote these technologies. Adoption of an executive order is another option to encourage the use of green power. It may also be useful to develop standardized renewable energy system designs appropriate for institutions like schools, hospitals, and other governmental buildings. Low income housing programs could use a standardized solar water heating system to replace conventional electric or gas domestic

hot water heaters. Lastly, the State Energy Office noted that improving animal waste-to-energy systems in North Carolina can play an important role both in producing green power and in improving water and air quality. There are several technologies proposed as alternatives to open waste lagoons that are being investigated by North Carolina State University as part of the Smithfield/Premium Standard agreement. In addition, municipal sewage systems can be converted to green power production by capturing the methane given off by these systems.

In its reply comments, CP&L noted that there appears to be general agreement that NC GreenPower should be implemented as proposed and that it should be evaluated for a reasonable period of time to determine its effectiveness before considering modifications. CP&L stated that it does not disagree with the objectives of stimulating green power production in North Carolina and exploring other avenues of promoting green power purchases and awareness, nor does CP&L oppose future study of some of the issues and suggestions raised by NCSEA, the State Energy Office, and Appalachian Voices. CP&L stressed, however, the importance of giving NC GreenPower ample opportunity to succeed as a stand-alone, voluntary program before pursuing any initiatives to change or replace the program, or augment it with parallel program(s) that may dilute NC GreenPower's impact or confuse consumers. CP&L further noted that many of the issues and suggestions raised by NCSEA, the State Energy Office, and/or Appalachian Voices are not new; some in fact, have been discussed at length and decided upon by the diverse group of stakeholders who forged NC GreenPower over the past eighteen months, including: generation sources to be included and excluded from eligibility for funds collected by NC GreenPower and the structure and financing of the marketing and consumer education programs in support of NC GreenPower. Lastly, CP&L emphasized that some of the parties have made recommendations that either fall outside the scope of the proceeding, or warrant far more investigation and discussion than is provided for by this proceeding. Those include: mandatory consumer subsidization of green power by a PBF; mandatory RPS to be imposed on utilities; revision of interconnection standards for independent generators; net metering (with its attendant debate over avoided cost calculation methodologies); revision or reinterpretation of the "NC Ridge Law"; and longer-term purchase contracts for renewable generators. These are complex issues with far-reaching implications for consumers and utilities, and should not be considered without extensive study and careful thought.

Duke, in its reply comments, noted that some of the initial comments raise significant issues that should be further considered before any recommendations are made to the General Assembly. For example, NCSEA suggested that new rules are necessary for interconnecting renewable generators to the grid, and that the lack of such rules and the lack of simplified contractual agreements between utilities and small and middle-size renewable generators serve as barriers to green power production. It also raises issues regarding the calculation of avoided costs. These issues require detailed study and analysis in a manner that is not provided for in this proceeding. Moreover, these issues were raised in the discussions and collaborative process leading up to the creation of

NC GreenPower and the green power tariffs filed by utilities in this docket. Lastly, Duke noted that it participated in an extensive collaborative process involving environmentalists, alternative energy producers, renewable resource specialists, consumer and commercial representatives, other utilities, regulatory, State and Federal agencies, and other interested parties to develop NC GreenPower. The parties expended a great deal of effort and successfully reached general consensus on NC GreenPower and the tariffs. The additional issues raised in other parties' comments can be addressed after some experience is gained with NC GreenPower and the proposed tariffs, including customers' use of those tariffs. The information gained from such experience is likely to enhance any discussion of the additional issues and thus make such discussions more productive.

In its comments, Dominion indicated that it supports the initial comments filed by CP&L and Duke. Noting that NC GreenPower will provide an opportunity for North Carolina customers to voluntarily purchase blocks of "green" power, Dominion stated that it is important, particularly during a time of economic uncertainty, to keep contributions to green power production in the State on a voluntary basis. Dominion further noted that NC GreenPower has a marketing subcommittee that has been charged with developing a plan to create awareness of, and interest in, the program as it is implemented. The marketing subcommittee will also be monitoring the response of consumers to the marketing efforts and will adjust the marketing plan as needed to optimize the promotion to residential, commercial and industrial customers throughout the State within the budget that it has available. Therefore, all initiatives to promote and encourage consumer participation in NC GreenPower should be left to the group that has been established and charged with that responsibility. Lastly, Dominion agreed with CP&L that exploring other sources of funding and additional incentives are premature at this time. Rather, the NC GreenPower program should be implemented and given a reasonable time to mature before other options are explored.

In its reply comments, CUCA reiterated its belief, as stated by many others, that it is important for the voluntary NC GreenPower program to be given ample time to be developed before pursuing any efforts to implement mandatory charges. CUCA also addressed the proposals and concepts in the comments of the State Energy Office and NCSEA with which it materially disagrees. First, CUCA noted that the State Energy Office's recommendation regarding the PBF and RPS cautioned that the options should "continue to be studied and evaluated." If the study and evaluation of PBFs ultimately leads to the implementation of a PBF, then an equally careful study of a fair allocation of cost responsibility for the PBF should be undertaken before any such charges are assessed to retail ratepayers. Second, CUCA objected to the State Energy Office's proposal to reduce the impact on electric ratepayers of funding various uneconomic environmental projects by "spreading these charges to natural gas customers." CUCA noted that North Carolina's retail natural gas customers already pay among the highest rates in the nation to purchase natural gas service from local distribution companies and that these same customers are already subsidizing uneconomic natural gas expansion in unserved areas of this State. The notion that retail natural gas customers should somehow be forced to share the

burden of subsidizing uneconomic “green” electric generating capacity from which the retail natural gas customers derive no benefit is objectionable. North Carolina’s businesses are already at a competitive disadvantage, and the State is losing manufacturing jobs at an alarming rate. North Carolina does not need to further exacerbate this problem by raising natural gas rates to subsidize uneconomic electric generation.

CUCA further noted in its reply comments that NCSEA’s comments support a wider variety of proposals than the State Energy Office without advocating careful and cautious study before implementing the proposals. CUCA noted that one source for the financial incentives proposed by NCSEA is “having all North Carolina energy users contribute a small fee to a public benefits fund.” Such a funding concept, along with the NCSEA proposal to expand the charge to include natural gas customers, are similar to the concepts addressed by the State Energy Office and suffer the same shortcomings and inequities discussed above. Moreover, NCSEA’s goal of generating $120 million per year for green subsidies does not appear to be based upon any identifiable study or have any grounding in fact. NCSEA’s attempt to characterize a funding charge as “competitively neutral” because it would be “non-bypassable” and applied equally to all customers is difficult to understand since North Carolina businesses must compete with businesses in other states and countries that have not established PBFs. Consequently, the imposition of a PBF charge cannot be “competitively neutral.” In addition, in support of the proposal to increase renewable energy to more than 10% of investor-owned utility portfolios, NCSEA claims, without citation to any study, that such diversity will reduce energy price volatility. Even if such a claim were true, it would seem to come at the cost of higher electricity costs, as a result of maintaining a portfolio in which 10% of a utility’s generating capacity is not economic. Lastly, CUCA stated that NCSEA’s claim that a diversified portfolio will produce new high technology energy businesses and skilled jobs also ignores the reality that the costly subsidization of such uneconomic green technology will eliminate existing jobs and existing businesses.

CIGFUR, in its reply comments, stated that a number of parties recognized that residential, commercial and industrial ratepayers will ultimately bear the costs of proposed programs such as a PBF or an RPS. Electric rates, however, should be based on the cost of providing service and not burdened by subsidies or hidden taxes. The economic impacts of programs that seek to address environmental concerns through energy policy should be considered. Such programs should be cost-effective solutions based on facts, sound science and workable technology, and they should not be funded through surcharges to electric bills. Thus, NC GreenPower, which will use market forces and voluntary public participation to expand the use of green power in the State, should be given a chance to work before mandatory and potentially conflicting programs are considered.

In its comments, Craven County Wood Energy noted that it is the largest provider of renewable energy in North Carolina, generating about 360,000 MWh annually. The problem for renewable developers in North Carolina is that wholesale power rates (and avoided costs) are currently too low to build new renewable facilities. The solution, stated

Craven County Wood Energy, is to raise wholesale power rates so that renewable energy projects can be developed, built, and operated at a profit. First, Craven County Wood Energy recognized that NC GreenPower, though not the cure-all answer, is an excellent start and needs to be given a chance. Second, North Carolina should consider adopting an RPS that does not interfere with NC GreenPower, that creates a level playing field where particular utilities are not disadvantaged, that provides credit for existing renewable resources that have already been developed, and that considers all available resources in the region. Third, low cost financing should be available for renewable energy projects. Independent power projects are often financed with higher risk credit facilities with high interest rates. A guarantee of such loans would reduce financing costs and reduce the cost of new renewable energy projects. Fourth, renewable generators should explore U.S. Department of Energy (DOE) funding opportunities. Craven County Wood Energy noted that DOE has been very favorable to renewable energy development and may have grant money available. Fifth, renewable developers should explore agricultural synergies. Craven County Wood Energy indicated that it currently utilizes 30,000 – 40,000 tons per year of brooder house poultry waste for energy production. This has helped solve a disposal problem for Goldsboro Milling while providing a cost-effective fuel for Craven County Wood Energy. There may be other such synergistic opportunities. Lastly, North Carolina should learn from other states. Craven County Wood Energy noted that other states, such as Texas, are somehow developing renewable energy, even in today's economy. North Carolina should study their example to see what we can learn from their strategies.

In his reply comments, the Attorney General indicated that he, too, supports the adoption of net metering, noting that allowing small renewable energy generators to net meter their unneeded electricity would help improve North Carolina's air quality. Net metering also would complement NC GreenPower by encouraging investment in renewable energy resources by homeowners whose production of electricity will not be on a scale large enough to justify participation as a seller to NC GreenPower. The Attorney General further stated that he supports the adoption of standard interconnection guidelines that will eliminate unnecessary requirements for those persons seeking to connect a generator to the grid. The success of both NC GreenPower and net metering depends upon the application of reasonable uniform rules that fairly protect the interests of the utilities and suppliers. Lastly, the Attorney General urged caution with regard to consideration of the proposed PBF and RPS, noting that it could be unfair to require consumers to shoulder the additional costs of such mandatory programs at this time. In assessing a PBF or RPS, the General Assembly should consider (1) the effect they would have on the NC GreenPower program, in which consumers will be asked to voluntarily support the development of renewable resources, and (2) the recent enactment of the Air Quality Improvement Act, which, while producing excellent environmental results for North Carolina's citizens, will have to be paid for by consumers for the next five to seven years.

The Public Staff, in its comments, indicated that it supports the concept of a mandatory PBF with a maximum monthly contribution per customer. In addition, the State

could effectively stimulate green power production by making loans to green power projects. One of the greatest problems currently facing the NC GreenPower program is that its premium payments to green power suppliers cannot be guaranteed, creating serious difficulties for prospective green power suppliers when they apply for bank financing for their projects. If developers could obtain loans from the State, worthwhile projects that would otherwise have to be abandoned could be brought to completion. The Public Staff further stated that it supports purchases from NC GreenPower by all energy consumers, including the State – even a relatively small purchase would signal the State's support for the program. The Public Staff also supported the use of the Clean Water Management Trust Fund to develop alternative energy projects, provided those projects in fact make a direct and substantial contribution to improved water quality. The Public Staff agreed that an RPS should be investigated, but questioned whether it should actually be implemented during the current economic slowdown since it would lead to an increase in the cost of power that could be passed through to the ratepayers. Other suggestions in the parties initial comments, such as tax incentives and credits, public recognition and awards programs, renewable energy grants, and public education campaigns could also be useful in stimulating green power production in the State. The Public Staff stated that it does not support requiring the State's electric utilities to pay more for renewable power purchases than is required by PURPA, but does support making 15-year avoided cost contracts available to all renewable generators that are eligible for avoided cost rates under PURPA.

The Public Staff further noted in its comments that some of the barriers identified by the parties are in the process of being remedied. For example, although the Public Staff does not support the simplest form of net metering, under which the dials of the customer's meter run in both directions, Duke Power and Progress Energy have adopted tariffs that allow a form of net metering for photovoltaic energy producers. The Public Staff recognized that the absence of standardized interconnection arrangements for small generators is a barrier to the development of green power, and stated that meetings among interested parties are currently being organized in an effort to determine whether such standards can be developed by negotiation and mutual agreement. The Public Staff further agreed with other comments that the high cost of renewable power and the lack of public education about renewable energy technologies constitute barriers to green power production. The Mountain Ridge Protection Act is also a barrier to wind power development, but its adverse impact on wind power may be outweighed by its aesthetic benefits. Some knowledgeable observers have suggested that even with the ridge law in effect, wind power projects can be developed successfully in mountain areas below ridgetop level and at the coast. The Public Staff agreed with CIGFUR and CUCA that given the existing economic difficulties, it would be undesirable to adopt any measures that will increase rates in the short term. Moreover, it is important at all times to ensure that customers are not burdened with unnecessarily high rates. Over the long term, however, all parties must recognize that any measures which substantially reduce the air pollution associated with electric power generation – whether by substituting cleaner fuels for the traditional fossil fuels, or by directly limiting pollutant emissions from traditional fossil-fired plants – will have a significant cost, which will have to be borne by taxpayers or

ratepayers. Lastly, the Public Staff agreed with the State Energy Office that as laudable and important as NC GreenPower is, its effect on the overall development of renewable energy in North Carolina will be very limited. For this reason, the proposals made by the parties to this docket must at some point receive very serious consideration, even if they are not implemented immediately. The implementation of NC GreenPower cannot be viewed as the final answer to the issues of air pollution and renewable energy development in North Carolina.

Discussion and Recommendations

The Commission appreciates the opportunity to further assist the General Assembly in its consideration of renewable energy resources, and commends the General Assembly for its foresight and its support of NC GreenPower, the statewide green pricing program currently being implemented. The expanded use of renewable energy in North Carolina can have a positive impact on the environment in this State as well as the health, safety, and welfare of the public by reducing the amount of electricity generated by the combustion of coal and other fossil fuels, thereby reducing the emission of greenhouse gasses and other harmful pollutants, protecting water quality, and contributing to the safe and efficient disposal of animal waste. Increasing the use of renewable generation will also provide economic support for the developers and ultimately help reduce cost discrepancies between renewable and traditional generation.

The Commission is pleased by the participation of interested stakeholders in this proceeding and particularly the thoughtfulness and thoroughness of the comments received. All parties agreed that renewable resources must necessarily play an increasingly important role in the State's energy future and in protecting our environment. There was considerable disagreement, however, as to what, if anything, should be undertaken at this time beyond NC GreenPower to stimulate renewable energy production. We have attached as Appendix G to this report for the General Assembly's consideration a comprehensive list of the items identified by the parties in their comments in response to each specific request in Section 6 of H1215.

As evidenced by the parties' comments, there is a broad range of ideas regarding actions that could be taken or policies that could be adopted by the State to stimulate renewable energy production. A number of these ideas might be easily implemented; others, however, raise complex issues that are more properly the subject of further study and debate. The Commission, therefore, as a result of its investigation pursuant to Section 6 of H1215, makes the following short- and long-term recommendations with regard to actions the General Assembly might take to stimulate renewable energy production in North Carolina.

First, the Commission recommends that the General Assembly continue its support of the voluntary NC GreenPower program. The Commission notes that considerable effort has been put forth and that positive new alliances have been forged in the formulation of

this program. In fact, the development of NC GreenPower over the past year represents perhaps the most progress ever achieved for renewable energy in North Carolina within such a short amount of time. In the short term, however, there are a number of actions that members of the General Assembly might cause to be taken to support the nascent NC GreenPower effort and help to ensure its success, including: (1) adopt a resolution encouraging State Government, public universities, and the general public to support renewable energy through participation in NC GreenPower; (2) call on Congress to direct or encourage federal agencies and institutions with facilities in North Carolina, such as the Environmental Protection Agency, to participate in NC GreenPower, (3) participate as individual consumers in NC GreenPower through your homes and businesses; (4) personally endorse NC GreenPower and participate in home-district promotion of the statewide renewable energy program; (5) instruct the Department of Commerce to provide information on and encourage participation in NC GreenPower in its business recruitment efforts; (6) adopt tax credits available to residential and business consumers for their support of renewable energy through participation in NC GreenPower; and (7) appropriate funds to support State Government participation in NC GreenPower or to support NC GreenPower directly.

Despite this progress, however, NC GreenPower, because of its limited scope, is no panacea. Even under the most optimistic scenarios regarding consumer participation, the demand for renewable energy through NC GreenPower will not support the potential capacity for renewable energy production in North Carolina. Thus, while NC GreenPower is a good first step toward increasing the amount of renewable generation in North Carolina, the State will likely find it necessary to consider additional steps to support the tremendous potential for the development of renewable energy. The Commission, therefore, recommends that the General Assembly carefully study, evaluate, and debate a number of more complex and more controversial policy options suggested by the parties in their comments to this proceeding, such as the adoption of a public benefit fund or a renewable portfolio standard. The Commission, however, specifically does not endorse any of the parties' suggestions and does not recommend that the General Assembly adopt any particular policy option without further study.

Most parties agreed that the foremost barrier to the growth of renewable energy is the high cost of such power as compared to more traditional power generation. Thus, many of the options that might be most effective in stimulating the production of renewable energy in North Carolina come at an increased price that must be paid either by taxpayers or by North Carolina's energy consumers. Although such costs would likely be spread across all consumer groups, representatives of high-volume industrial consumers, in particular, expressed great concern about the potential impact of such costs on their competitiveness and continued viability given the State's other recent environmental initiatives and the current tough economic climate. Thus, the issues surrounding renewable energy cannot be considered in a vacuum, but must be considered in the context of the broader economic issues confronting the State. Additional study would ensure that the costs of such programs are outweighed by their benefits and that the costs are equitably

spread to all consumers. In addition, many of the policy options identified would require changes to North Carolina law. Therefore, beginning this session, the General Assembly might consider taking the following long-term actions with regard to these more complex policy options: (1) stay abreast of federal legislation (comprehensive energy legislation introduced in the last session of Congress proposed a federally mandated renewable portfolio standard, and similar legislation might be introduced in this Congress); (2) commence hearings to engage interested stakeholders in debate about the pros and cons of the policy choices identified in Appendix G; (3) undertake further study to specifically determine the likely impact of the policy choices on taxpayers and energy consumers; and (4) meet periodically with the Commission to discuss the status of renewable energy in North Carolina and for updates on Commission dockets and relevant national events.

Lastly, the Commission notes that a number of suggestions by the parties are subject to being brought before the Commission without further action by the General Assembly. Some of these, such as the inclusion of environmental externalities in cost determinations and the availability of long-term contracts for certain renewable power producers, have been considered by the Commission in the past and rejected, at least in part, for the reasons expressed in the Commission's orders. In addition, the Commission's freedom with regard to others, such as the level of avoided cost rates and the development of interconnection standards, may be limited due to federal preemption or the content of governing federal law. Still other issues, such as net metering, are the subject of ongoing dockets or periodic review before the Commission. Interested parties are welcome and invited to participate in such proceedings and to offer proposals for consideration by the Commission. The Commission is available at any time to provide the General Assembly with an update on the status of these issues.

In conclusion, the Commission believes that the General Assembly should utilize all reasonable resources to stimulate the appropriate production and use of renewable energy in North Carolina. The Commission is encouraged by the potential for enhanced renewable generation in this State and remains willing to assist the General Assembly in any way possible in this matter.

APPENDICES

A. Final North Carolina Green Pricing Accreditation Criteria, Approved by the Center for Resource Solutions (October 31, 2002)

B. Advanced Energy Corporation's Revised NC GreenPower Program Plan, Docket No. E-100, Sub 90 (November 22, 2002)

C. Order Approving NC GreenPower, Docket No. E-100, Sub 90 (January 28, 2003)

D. Order Appointing Members, Chair, and Vice-Chair to NC GreenPower Board of Directors, Docket No. E-100, Sub 90 (March 11, 2003)

E. Order Requesting Comments, Docket No. E-100, Sub 90 (October 30, 2002)

F. Order Extending Deadline for Filing Initial Comments and Scheduling Informational Presentation, Docket No. E-100, Sub 90 (December 10, 2002)

G. List of Items Identified in Response to Each Specific Request in Section 6 of H1215

LOCAL REGION PROPOSED ACCREDITATION CRITERIA:

MEMORANDUM OF UNDERSTANDING AMONG North Carolina Green Pricing Accreditation Stakeholders Group (Stakeholders) and The Center for Resource Solutions (CRS)

North Carolina Stakeholders to the CRS Green Pricing Accreditation Program have reviewed the "Accreditation of Green Pricing Programs Final Criteria, Version IX" dated October 11, 2002 ("National Criteria"). Organizations involved in the stakeholder process are supportive of the goals of the Green Pricing Accreditation Program as articulated in that document, are committed to upholding the standards represented by the Green Pricing Accreditation Program's National Criteria, and agree to help enforce those standards by notifying CRS, host to the Green Pricing Accreditation Program, of any instance when an Accredited Program fails to meet the Green Pricing Accreditation standards adopted by the North Carolina stakeholders group.

The Stakeholders support the following criteria for the Accreditation of green pricing programs in the state of North Carolina. These criteria are designed to be consistent with and refer back to the national criteria for accreditation of green pricing programs.

RESOURCE CONTENT

Eligible renewable resources that may be used to supply accredited green pricing programs are the following:

a. Solar thermal electric or photovoltaic energy.

b. Domestic solar thermal systems (i.e. hot water heaters). Must have BTU meters and replace electric systems. This resource requires further stakeholder and Board review and approval of metering requirements before it is approved for inclusion.

c. Wind power.

d. Geothermal electric.

e. Landfill methane, wastewater methane, and animal waste methane (from livestock manure and poultry litter). In North Carolina, there has been a moratorium on new hog farm construction since March 1, 1997. That moratorium was extended to Sept. 1, 2003 per House Bill 1216. If the moratorium is lifted, stakeholders will reconvene to discuss hog waste issues.

Biomass methane generation emissions limits for NOx are as follows[1]:

i. For facilities located in NOx non-attainment areas, standard is .18 lbs/MMBTU (or 2 lbs/MWh).
ii. For facilities located in NOx attainment areas, the standard is:
.29 lbs/MMBTU (or 3.2 lbs/MWh) for facilities placed online before May 2005
.25 lbs/MMBTU (or 2.78 lbs/MWh) for facilities placed online between May 2005 and May 2008
.2 lbs/MMBTU (or 2.22 lbs/MWh) for facilities placed online after May 2008

All numbers are average annual emission rates. Emissions rates will be grandfathered, in order to allow for long-term contracts.

[1] Units converted from lbs/MMBU to lbs/MWh assuming a heat rate of 11,110 Btu/kWh.

f. Hydropower that has been certified as low impact by the Low Impact Hydropower Institute.

g. Tidal or wave action facilities. Require stakeholder review and approval before approved for inclusion.

h. Hydrogen created exclusively from renewable fuels listed above.

RESOURCE LOCATION

A green pricing program provider's energy production facilities shall be located in North Carolina and grid-tied. A potential provider or a green pricing program may petition stakeholders for a variance to allow energy from adjacent states if North Carolina supplies are inadequate to meet customer demand.

NEW RENEWABLES

All accredited products must meet the definition of new renewable energy. An eligible new renewable generation facility must either (1) be placed in service (generating electricity) on or after January 1, 2001; or (2) include the incremental capacity and associated energy from an existing renewable facility achieved through repowering activities undertaken on or after January 1, 2001. Incremental increases of capacity that do not result from repowering will also be considered as new. Repowering means that at least 80% of the fair market value of the project derives from new generation equipment installed as part of the repowering. Renewable energy generated in response to any mandatory requirement to construct or contract for the renewable energy is not eligible for accreditation. Mandatory purchasing requirements such as federal executive orders for agencies to purchase renewable energy will not be considered mandated generation. If the North Carolina accreditation criteria definition of eligible renewables is altered in the future, facilities that are included in a green pricing program at that time will grandfathered as eligible for the original life of the project. The stakeholders can consider including other existing facilities when their PURPA contracts expire. Inclusion of these facilities will require Board approval.

RESOURCE MIX

<u>For the first and second year of accreditation:</u>
No required resource portfolio percentages.

<u>Following the first two years of accreditation:</u>
The combination of biomass fuel types and hydro should comprise no more than 85% of the delivered electricity mix for any accredited product. Wind and/or solar should comprise at least 15% of the delivered electricity mix of a given accredited product.

RENEWABLE ENERGY BLOCKS

Energy blocks offered to customers within the context of an accredited green pricing program must include at least 75 kWh of new renewable energy supply per month delivered to the grid.

PERCENT OF USE (BLENDED) ENERGY PRODUCTS

Products sold as a percent of usage based on a customer's metered monthly use (blended energy products) are eligible for green pricing accreditation if the total amount of electricity sold to customers contains at least 15% new renewable energy.

DONATIONS

Donation programs are not eligible for accreditation. However, customers of green pricing programs may donate purchases to other customers, as a "gift subscription".

EMISSIONS REQUIREMENTS ON NON-RENEWABLE PORTION OF BLENDED ENERGY PRODUCTS

The non-renewable generation component of a percent-of-use (blended) eligible product must have an average emissions rate per kWh for SO2, NOX, and CO2 that does not exceed the average emissions rates for the net system power that the customer otherwise would have received from their utility. In addition, the non-renewable generation component may not include nuclear power other than what is contained in any default system power included as part of this product (i.e. the product may not include differentiated nuclear power).

SECONDARY USE

Customers who purchase the qualifying amounts of accredited green power are eligible to use the Green-e logo and reference the Accreditation Program and its standards when describing their power purchase. CRS will provide those requirements to the stakeholders. A green pricing program provider can govern use of its own logo for secondary use.

PRODUCT PRICING

The price of accredited products should not exceed direct program costs plus overhead (including direct marketing and educational efforts). In no case should the above market costs of the energy used directly for an accredited green pricing program be allocated to customers who are non-participants in the program, unless such costs are related to public policy initiatives deemed acceptable by local stakeholder groups, subject to final approval by the Green Pricing Accreditation Board ("Board").

The delivery of the renewable resources should be sufficient to supply the customer's green power purchase on an annual basis. Verification will be conducted on a calendar-year basis. For the first year of accreditation, the true-up period should be completed no later than the end of the calendar year following the calendar year of a given customer's payment date. During the first year of accreditation an additional year period will be granted to allow for final meter reads and balancing of supply and demand. Following the first year of accreditation, the first three months of the following calendar year will be granted for final meter reads and balancing of supply and demand from the previous year. No banking forward across calendar years will be allowed.

MARKETING COSTS AND PERFORMANCE TARGETS

As part of their annual accreditation review, participating green pricing program providers will submit to the Center for Resource Solutions, for ultimate review by the Board, an annual report that lists

a) number and type/class of customers being served by the green pricing program;
b) kWh of renewables sold to those customers; and
c) copies of all marketing materials used during the year.

If the Stakeholders believe an accredited program is not receiving adequate support, they shall first seek an explanation and understanding from the green pricing program provider. Failing to receive an acceptable explanation, the Stakeholders may petition CRS to review the marketing effort and plans. If CRS agrees, it may seek additional information, such as overall marketing expenditures for the accredited program. The participating green pricing program provider shall be given an opportunity to explain its position directly to

the Board. All information provided by participating green pricing program providers to fulfill this criterion will be treated as confidential by the Center for Resource Solutions. The Stakeholders recognize that the Board reserves the right to make case-by-case determinations on the adequacy of individual marketing efforts made by participating green pricing program providers.

In regions where retail choice for those customers to whom the program is marketed will be available within two years, program marketing costs may not be shared with non-participating customers.

Pilot programs offered to select numbers of customers may be granted accreditation if the program is slated for expansion under a time frame deemed reasonable by local stakeholders, pending final acceptance by the Board.

Accredited green pricing programs must be offered to all retail customer classes and in all regions of a utility service territory not eligible for retail choice, except in those cases where a service territory is broken across regulatory or contractual jurisdictions.

In some cases, as program sign-ups increase, green pricing program providers will need time to procure renewable resources from the open market or build new capacity in order to meet demand. In this event, consumers may have to be on a waiting list before they can officially subscribe to a green pricing program. When a green pricing program provider determines that the program is fully subscribed, or will be fully subscribed in the foreseeable future, the provider will notify CRS of the situation and present plans for expansion of resources available through the program to serve the additional demand. Once the expansion plan has been finalized, all customers on the waiting list shall be notified in writing of the plan to serve their needs and the projected timetable for completion. Semi-annual updates will be provided to CRS and customers on the waiting list until additional resources are available to serve the additional demand. Failure to adequately expand the program to serve customer demand may be grounds for removing accreditation.

DISCLOSURE AND CUSTOMER INFORMATION PROVISIONS

Green pricing program providers offering Accredited programs or utilities, municipalities, and/or electric membership cooperatives participating in an accredited statewide or regional green power program will annually disclose to all of their customers, irrespective of their participation in the Accredited program, the fuel mix of the resources used to generate the past year's system power, and data on the electricity purchased by the customer, if it differs from system power (historic disclosure). The green pricing program provider or utilities, municipalities, and/or electric membership cooperatives participating in an accredited statewide or regional green power program also will provide a disclosure statement to prospective customers of the Accredited program that lists the resources used to supply the electricity for the program (prospective disclosure) as well as information on the participating utility's, municipality's', and/or electric membership cooperative's overall fuel mix. The disclosure label shall be easily accessible on the green pricing program provider's or participating utility's, municipality's', and/or electric membership cooperative's website, but web-based disclosure alone is not sufficient dissemination.

CRITERIA FOR TREATING RETAIL COMPETITION

Accreditation will not be available to any utility programs targeted at customers who have access to retail competition or where it has been announced that they will have access to retail competition within two years of the time accreditation first takes effect.

In the event a particular jurisdiction opens to competition, the accreditation criteria will be supplanted by the criteria required for *Green-e* certification.

REGULATORY APPROVAL

Accreditation is only available to programs that have been approved by the appropriate regulatory or oversight body with jurisdiction over the program prior to the program's nomination for Accreditation.

ADDITIONAL ISSUES

None.

ELECTRIC INDUSTRY RESTRUCTURING

The Stakeholders agree that this MOU is applicable while the electric industry in North Carolina retains its current structure. Parties agree that the criteria established here will be revisited in the event that industry restructuring becomes imminent in North Carolina.

REGULATORY PROCEEDINGS

The Stakeholders agree that while individual stakeholders may use regulatory proceedings to air grievances in an accepted manner, the voluntary Accreditation Program, its voluntary processes, and its voluntary governance shall never be the basis for an action in a regulatory proceeding.

TERMINATION

If any party to the MOU violates any portion of the MOU, all parties have an opportunity to terminate their participation in the MOU. Parties must inform all other parties, in writing, of the violation they believe has occurred and agree to act informally to resolve the dispute. If a resolution is not reached, any party may terminate its participation in the MOU by informing all other parties of their decision to discontinue participation in the MOU.

CEASE & DESIST PARTICIPATION

Once accredited, green pricing program providers with accredited programs found by CRS to be out of compliance with the terms of the Accreditation Program and its criteria, as outlined in this MOU, are at risk of having accreditation terminated. If a green pricing program provider is knowingly out of compliance or expects to be out of compliance, they should notify CRS immediately to enter a negotiation with the Board. If the green pricing program provider is knowingly out of compliance and does not notify CRS, the Board will notify the program provider that they have 15 days to respond in writing regarding the violation, after which the Board will determine whether their accreditation is terminated and need to immediately cease and desist their participation in the Accreditation Program, including removing references to the Accreditation Program from marketing materials or making any other public representations about a particular product's participation in the Accreditation program.

- See Attached "REGIONAL STAKEHOLDERS IDENTIFICATION FORM" for a complete list of organizations participating in the North Carolina Green Pricing Accreditation Stakeholders Group.

REGIONAL STAKEHOLDERS IDENTIFICATION FORM

The following organizations have voluntarily participated in the development of Green Pricing Accreditation Criteria for the North Carolina region. Organizations involved in the stakeholder process are supportive of the goals of the Green Pricing Accreditation Program as articulated in the National Criteria, are committed to upholding the standards represented by the Green Pricing Accreditation Program's National and North Carolina criteria, and agree to help enforce those standards by notifying the Center for Resource Solutions, host to the Green Pricing Accreditation Program, of any instance when an Accredited Program fails to meet the Green Pricing Accreditation standards adopted by this stakeholders group for the North Carolina region.

Participating Organizations:

Name	Organization	Email Address
Garth Boyd, Ph.D.	Smithfield Foods, Inc.	garthboyd@smithfieldfoods.com
Kim Carlyle, co-chair	Climate Connection:	kcarlyle@juno.com
Alice Loyd	NC Interfaith Eco-Justice Network	aliceloyd@earthlink.net
Evelyn Mattern	North Carolina Council of Churches	Emattern@nccouncilofchurches.org
John Delafield	FutureVision	LRBCo@aol.com
Avram Friedman	Canary Coalition	canarycoalition@earthlink.net
Richard Harkrader	NC Sustainable Energy Assoc	harkrader@mindspring.com or ncsea@mindspring.com
Maggy Inman Vice Pres., Administration	NC Advanced Energy Corp.	minman@advancedenergy.org
Carl Wilkins Director, Client Services	NC Advanced Energy Corp.	cwilkins@advancedenergy.org
Timm Muth	State Energy Office	timothy.muth@ncmail.net
Michael Shore	Environmental Defense	mshore@environmentaldefense.org
Stephen Smith	Southern Alliance for Clean Energy	sasmith@cleanenergy.org
Kwame Yeboah Director, Pre-engineered Systems	Duke Solar Energy, LLC	kyeboah@dukesolar.com

November 22, 2002

Ms. Geneva S. Thigpen
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4325

RE: NCUC Docket No. E-100, Sub 90
Advanced Energy NC GreenPower Program Plan (Revised)

Dear Ms. Thigpen:

North Carolina Advanced Energy Corporation (Advanced Energy) submits for filing with and approval by the Commission this original and thirty (30) copies of its revised NC GreenPower Program Plan for the North Carolina electric utility service areas. The NC GreenPower Program (NCGP) will be offered in conjunction with electric utility tariffs filed under this same docket. This revised plan and related tariffs are being filed in further response to the Commission's orders directing the utilities to file such tariffs and requesting Advanced Energy to file a plan to administer the program. In contrast to the plan initially filed on May 31, 2002, the revised plan and tariffs put forth a green power program with two products. One product is a mass-market product comprised of higher priced renewable resources and the other is a large-volume product that is designed to offer large volume customers an alternative product that is more price competitive in comparison to out-of-state green tags.

The necessity of making this revised filing resulted from 1) information gained from the Public Hearings held by the Commission during the week of July 15, 2002, 2) inability of the stakeholders to agree on the resources that should be included in the green power resource mix for a single product, and 3) recognition that large commercial and industrial customers would likely opt to buy out-of-state green tags if all blocks of green power sold under this program were based on the limited number of the higher priced green resources.

The enclosed revised NC GreenPower Program Plan (dated November 22, 2002) outlines the administrative and operational plan to implement a statewide voluntary green power pricing program in North Carolina.

In order to develop a program with broad support, Advanced Energy convened an Advisory Committee of stakeholders to advise and assist in the development of a program. The Advisory Committee stakeholders consisted of electric utilities, renewable generation providers, environmentalists, consumer advocates, regulatory staff, the Attorney General's office, the State Energy Office, and energy specialists. Four subcommittees were formed: Policy, Supply/Technical, Marketing, and Administration. Soon after forming the Advisory Committee, it was decided to seek accreditation for the program from national third party entities; a larger North Carolina stakeholder group was formed for this purpose and they met on a parallel basis. The Plan discusses in some detail which entity will accredit/certify each program product.

The NC GreenPower Program Plan is not a detailed operating document, but rather an outline of guidelines and objectives to convey the intent of the program. For example, details of the Request-for-Proposal (RFP) for renewable generation and the statewide marketing plan are still in development and therefore are not included in this document.

Advanced Energy's Board of Directors has approved the formation of NC GreenPower, a wholly-owned subsidiary of Advanced Energy. NC GreenPower will be a non-profit 501(c)(3) organization with a 19-member board of directors. The composition of the board is detailed in the plan.

Our letter dated May 31, 2002 and filed with our initial plan stated that there were several unresolved issues still in discussion. Also we pointed out that pending federal legislation, if passed, may facilitate or complicate the resolution of some of the issues. We now believe that the possibility of Congress reaching an agreement on a national mandatory portfolio standard for renewables is less likely. The issues we raised previously are as follows:

Who will financially stand behind the power purchase contracts? The utilities will enter power purchase agreements with qualifying renewable generators at Commission-approved standard avoided cost rates or negotiated avoided cost rates, consistent with Commission-approved practices. We currently see no way for the parties to agree on a method to guarantee the premium to be paid over and above the utility contracted amount for green power given that the program is based on voluntary participation by customers. We recommend that the Commission approve the program as submitted with the expectation that a long-term contract for the premium will not be required. If NC GreenPower cannot obtain resources for the program under the present plan, this matter can be revisited.

What will be the source of initial funding for marketing? Based on discussions with interested parties, it now appears that NC GreenPower is in a position to obtain the necessary funds for initial marketing expenses.

What will be the outcome of the accreditation process? Center for Resource Solutions (CRS) has tentatively approved the NC criteria resulting from the stakeholder process held by CRS. Upon approval of the NC GreenPower plan by the NCUC, NCGP intends to file for accreditation of its mass-market product from CRS. NCGP will seek certification of its large volume product from Environmental Resources Trust (ERT).

Should the existing hydroelectric providers have special consideration? This issue has been decided in that all resources will be subject to competitive bidding unless circumstances as described in the plan were to occur.

Should NC GreenPower purchase renewable power resources from outside the state? In the short term, no green power will be purchased from outside the state. This matter will be left for future consideration.

Should resources that do not supply electric power to the grid be included in the program? Initially, solar thermal will not be included in the program. Whether it will be included in the future will be subject to further stakeholder, Board, and Commission approvals.

We recognize that many diverse interests are represented here and that no single interest or representative group will be completely satisfied with the revised plan. However, we do believe that the revised plan comes much closer to gaining the necessary support for the program. The one area that was the most contentious and remains unresolved between the parties is the use of wood waste in the high-volume product (no wood waste will be allowed in the mass-market product). We have tried to achieve a compromise by excluding wood "chips" (derived from whole trees) and certain treated wood from the green power category in the interest of trying to obtain the support of those environmental groups concerned with NC forestry practices. Others believe that North Carolina's abundant wood waste should be used in a "constructive" manner such as in the production of power. Most likely, we have been unable to fully satisfy either of the opposing sides in this hot issue. Since power produced from clean wood waste will have to meet Environmental Resources Trust's stringent emissions standards, the issue mainly revolves around sustainability of our forests and whether the green power premium payments would indirectly and adversely impact the forests. We believe our compromise position represents the best solution at this time. At some point in the future this compromise can be revisited among these stakeholders after gathering appropriate data.

In summary, we feel that Advanced Energy used due diligence in all efforts to hear and consider all ideas and concerns. We appreciate your careful review of the revised NC GreenPower Program Plan dated November 22 as well as the associated utility tariffs.

Sincerely,

Dr. Robert K. Koger
President and Executive Director

NC GreenPower Program Plan
November 22, 2002

Mission

NC GreenPower (NCGP) is a statewide program designed to improve the quality of the environment by encouraging the development of renewable energy resources through consumers' voluntary funding of green power purchases by electric utilities in North Carolina. The program revenues will help provide financial incentives for generators of electricity from renewable sources.

Objectives

The objective is to use a statewide advertising and communications campaign to promote a simple and easy option for all electric customers in North Carolina to promote the use and development of green power generated in North Carolina. NC GreenPower is good for North Carolina's environment, it offers consumers a choice, and it accelerates the development of new renewable technologies in North Carolina.

The four main objectives of the program are to

1) improve the quality of the environment,
2) increase the amount of generation from renewables,
3) maximize the amount of investment in renewable generation, and
4) maximize the number of participants.

Program

The name of the program is NC GreenPower (NCGP). The name and logo will be registered with the state once they are in use.

A nominal block (or unit) of green power as included by utility tariffs will be offered by each participating electric utility in North Carolina on a monthly basis for a premium. Each block of energy purchased will authorize the program administrator to pay a premium to a renewable generator for an equivalent block of energy supplied to the electric grid in North Carolina. All the electric utilities in North Carolina have agreed to participate in the program: Carolina Power & Light (CP&L), Dominion North Carolina Power, Duke Power, ElectriCities, and the North Carolina electric cooperatives.

Although ElectriCities and the North Carolina electric cooperatives are participating in the program planning, each city and local electric cooperative's participation is subject to the approval of the governing board for each respective organization.

Customers participating in the program will receive and pay for energy used under the customer's applicable rate schedule. In addition to that cost, the contracted block(s) provided under the program shall be charged at the program's rate irrespective of the customer's actual monthly kilowatt-hour usage. Block charges for the program will be used by NCGP to offset the higher cost of producing, purchasing, and/or acquiring the renewable resources and for the administration of the program.

One Program, Two Products

The NC GreenPower Program will offer two renewable energy products in order to offer high volume buyers an affordable rate and to utilize more of North Carolina's renewable power resources. The products will be accredited or certified by third party national green power certifying entities, Center for Resource Solutions (CRS) and Environmental Resources Trust (ERT).

NC GreenPower proposes to provide two different product offerings, a mass-market product and a large volume product, each meeting different needs and intended to resolve the following issues:

Renewable energy resources that are currently providing energy to the grid are at risk for closing due to financial and other implications. Existing resources such as hydro power and clean wood waste biomass can provide renewable energy at a lower cost because they have already met their start-up costs and are just covering operating and additional capital costs. While these renewable resources are considered acceptable by CRS according to their criteria document, CRS will not accredit a program that includes resources already in existence at the inception of a green power program. A second issue has been that large companies desire to maximize the purchase of their power from renewable resources, but the price needs to be more competitive with "green tags" available to them from out of state. The two-product plan is designed to meet these two needs.

The first product is a mass-market product ($4 per block of 100 kWh), which is available for purchase by any NC electrical energy consumer. This block of new renewable energy will have a resource mix of solar, wind and methane from biomass delivering power to the NC electric grid on or after January 1, 2001. This resource mix has higher costs of production, which will result in a higher cost product than the large volume product. These are also renewable resources that the NC environmental community favors most and the product will be accredited by CRS. The accreditation of this product will provide assurance to the consumer that the power they are purchasing is new, green, and composed of these resources.

The second product is a large volume product, which offers a lower cost alternative for large volume consumers who purchase at least 10,000 kWh (100 blocks) of the product per month. To assist a broader base of renewable energy providers and to allow high volume electricity purchasers to maximize their support of green power, the large volume product will include a resource mix of solar, wind, small hydro, and all types of biomass, with certain limitations, as spelled out in more detail below. Both existing and new renewable energy generation will be included in this product in order to reach a target price of $2.50 per block of 100 kWh and to assist existing green power producers who have experienced significant reductions in their "avoided cost" payments from the utilities. NCGP will seek certification for the large volume product from ERT to provide consumer confidence in the product's green status. A large volume customer would have to agree to a one-year contract minimum to qualify to purchase the large volume product.

The large volume consumer does not have to purchase the large volume product if they perceive additional value by purchasing the CRS-accredited mass-market product. Such value may include the ability to qualify for using CRS's green-e logo, which they couldn't do by purchasing power under the high volume discounted product. However, NCGP plans to promote its own logo to green power purchasers.

Therefore, for the $4 per block premium paid to NC GreenPower for the mass-market product, a consumer will be purchasing 100 kWh of green energy from new solar, wind, and methane from a product that is accredited by CRS. For the $2.50 per block premium, the large volume consumer can purchase a block that includes all biomass, small hydro, solar, and wind and is certified by ERT.

Resources

"Green power" is defined (for NCGP purposes) as renewable energy that consists of electricity provided from solar, wind, small hydro of 10 MW or less, landfill methane, agricultural waste, animal waste and other biomass (wood waste) resources that is delivered to the NC electricity grid. The producer of green power will be required to enter into a power purchase agreement with a NC electric utility. The green power producer will also be required to enter into a contract with NCGP for participation in the NCGP program. Once the NCGP program is operating, the NC GreenPower Board may explore including metered domestic solar thermal systems (i.e., hot water heaters).

NCGP's green power resources will be qualified resources of generation from new and existing developments. The CRS accredited product will not include any existing resources.

Small Hydro: Any new small hydro facilities that desire to enter the CRS accredited program must be 10 MW or less and will have to meet licensing standards as defined by the Federal Energy Regulatory Commission (FERC), Low Impact Hydro Institute (LIHI), and the appropriate state and local governing agencies. It is anticipated that any new hydro facilities will involve the installation of new generating capacity on existing impoundments (dams).

Any new hydro generating facility that involves a new impoundment will not automatically be included in the program but will require special approval.

Wood waste: NC GreenPower recognizes and encourages responsible and sustainable business practices for forest and wood products management. Although North Carolina has abundant forestry and wood resources, the quality and quantity of original forests are in decline due to land development. Thus, developers are creating significant amounts of wood waste at the expense of the quality and quantity of original forests. NCGP does not intend for this type of wood waste to be included in the NCGP program. Therefore, the following guidelines have been developed for the types of wood waste that will be allowed for NCGP qualification: tree trimmings, mill residues (bark, sawdust and fines from primary processing facilities); segregated construction and demolition wood (excluding painted, treated, glued, pressurized wood or any wood contaminated with plastics or metals); clean wood waste from manufactured home plants, pallet recycling facilities, furniture manufacturers, finished building products and other similar industries; wood from land clearing that would otherwise end up in landfills; and wood bedding material removed from poultry brooder houses. Wood "chips" derived from processing whole trees within forested land will not be allowed as qualifying wood waste. However, the Board of NC GreenPower may review this exclusion in the future to determine if sustainable forestry practices are being employed in connection with wood chip production and to determine if such practices warrant the consideration of wood chips as a green power source, and if the environmental community is willing to recognize their use in such a way.

Solar and Wind: NCGP recognizes that solar and wind are perceived as the greenest of the green for renewable energy sources and therefore has set targets for maximizing the inclusion of these resources in the NCGP program. For the mass-market product, the target for solar and wind is 15% of the energy generated in the third year of the program. For the large volume product, the target for solar and wind is 4% of the energy generated in the third year. NCGP's ability to reach these targets depends upon the cost of and availability of the renewable resources in North Carolina. NCGP recognizes that these resources are very costly and therefore has set relatively high maximum rates to be paid to the producers of these resources (18¢/kWh for solar and 6¢/kWh for wind). It is hoped that the payment of these high rates to potential solar and wind producers will lead to these initial amounts of production and that economies of scale will result in further installations at less cost per kWh of solar and wind power produced.

The program administrator, Advanced Energy, will pay a premium only to those generation suppliers that qualify to receive a power purchase agreement from a North Carolina electric utility. AE will use a competitive RFP process, unless directed otherwise by the NC GreenPower Board, to select and contract with potential generation suppliers and to pay a premium, from revenues of the two proposed products, in addition to the payment provided by the utility. A negotiated process may be necessary in cases where an inadequate number of bids from green power producers are received.

The actual amount of electricity provided by renewable resources to the statewide electricity grid in NC during any specific month may vary from the number of blocks customers have purchased. However, a true-up of the delivery of the blocks to the purchase of blocks shall be completed within two years of the purchase.

The electric energy purchased from the renewable resources through the NCGP program will not physically be delivered to the participating NCGP customer but will displace electric energy that would otherwise have been produced from traditional generating facilities for delivery to customers.

Customer Participation

The participating utilities will be responsible for enrolling customers (residential, commercial and industrial) wishing to contribute to NC GreenPower. Customers joining NCGP are committed to purchase a minimum of one block (unit) of energy per month under the mass market product and at least 100 blocks per month under the large volume product for a contract period of one year. Mass-market product customers may have an option to increase or decrease the number of blocks of green power they purchase during their contract period.

The participating utilities will provide their own resources to fulfill their role in enrolling, billing and collecting premiums from customers in NCGP. The utilities will help market the program by including informational bill inserts. In addition to forwarding to Advanced Energy the collected revenues on a monthly basis, the utilities will also be responsible for providing Advanced Energy with monthly and annual totals, by residential and non-residential customer groups, for the results assessment.

CRS accredited programs must annually disclose to all customers, irrespective of their participation in the accredited program, the fuel mix of the resources used to generate the past year's system power and data on the electricity purchased by the customer, if it differs from system power (historic disclosure). In addition a disclosure statement must be provided to prospective customers of the accredited program that lists the resources used to supply the electricity for the program (prospective disclosure) as well as information on the utility’s overall fuel mix. NCGP will compile the statewide disclosure information but due to the cost of notifying customers and the lack of access to customer databases it is unreasonable for NCGP to fulfill this notification requirement. The NCGP participating utilities will fulfill the disclosure requirements required by the CRS accreditation in a mail stuffer on an annual basis.

Governance

Advanced Energy (AE) will create a wholly owned subsidiary named NC GreenPower. NCGP will apply for a 501(c)(3) non-profit status. Because NCGP would be a subsidiary of AE, AE's Board of Directors would bear the ultimate responsibility for NCGP. AE's Board, which is composed of four utility members and eight "public members" appointed by the Governor to staggered three-year terms, shall have oversight voting rights on major transactions affecting NCGP, such as changes in the legal structure of NCGP and yearly financial planning. AE is, in turn, governed by members of the NC Utilities Commission.

NCGP's Board of Directors will consist of 19 members. The following will be members of the NCGP Board:

2 AE Board of Directors members (only Public Members would qualify and the Treasurer of AE's Board will fill one of these seats)
5 North Carolina Utility members
5 NC GreenPower Technology members
5 NC GreenPower Consumer/Environmental Advocacy members
1 Director of North Carolina State Energy Office
1 President of AE

The Treasurer of AE's Board will serve as Treasurer for the Board of NCGP to provide consistent financial controls. The Chair of the AE Board shall appoint the second AE Board representative from the current Public Members of the AE Board. The President of AE shall serve as a member of the NCGP Board.

The five participating utilities shall have a representative on the NCGP Board. The President of the utility being represented will appoint the Board member.

The North Carolina Utilities Commission shall appoint the green power technology members, (from different technologies when available) and the green power consumer/environmental advocacy members. It is recommended to the Commission that the Environmental Representative on the Energy Policy Council be one of the five appointees to NCGP. Any NC resident may request that a name be put on the list considered by and appointed by the North Carolina Utilities Commission for appointment to the NCGP Board. The green power technology members and green power consumer/environmental advocacy members term appointments shall be for three years on a staggered schedule.

The individual serving as the Director of the State Energy Office shall serve as an NCGP Board member.

The Chair and Vice Chair of the NCGP Board will initially be appointed by the North Carolina Utilities Commission. Thereafter, the Chair and Vice Chair will be selected by a nominating committee from the current Board and appointed after the approval of the Board.

There shall be an Executive Committee for the NCGP Board. The Executive Committee members shall consist of a Chair of the Board, Vice Chair, Secretary, Treasurer, and member-at-large. The State Energy Office Director shall serve as the member-at-large unless elected to one of the other positions. The AE President shall serve as a voting member of the Executive Committee. Executive Committee members will serve for two-year appointments, with elections in odd numbered years. The position of Chair shall not be held by the same individual for more than four consecutive years. The AE President and Vice President of Administration shall serve as officers of the NCGP Corporation in the same capacity as for AE.

There will be an Advisory Committee accorded with the power to make studies or analyses as the Board may specify and to make such reports back to the Board upon request. The initial Advisory Committee will be the Advisory Committee that is currently in place. The Advisory Committee will meet as necessary in the first years of the program. The Board shall meet twice per year and annually report its activities to the AE Board and to the North Carolina Utilities Commission. This annual report will coincide with the time and day of Advanced Energy's annual report to the North Carolina Utilities Commission. A presentation will also be made to the NC Energy Policy Council on an annual basis or by request of the Council.

Administration (costs, reserve fund, budget, legal and accounting)
NC GreenPower will have a contractual arrangement with Advanced Energy to provide the personnel and services necessary to carry out the objectives of NCGP.

Accounting will be outsourced to AE. Accounting will be on an accrual basis and in accordance with Generally Accepted Accounting Principles. An annual budget for Operations, Contingency Funds and Program Related Expenses shall be prepared by staff and the President and submitted to the Board for approval.

An initial reserve account will be established at a level of $200,000 to enable the continuation of corporate activities should there be any interruption of funds to the Corporation. The reserve account will be increased as necessary as the program grows.

In the handling of any cash reserves, the NCGP investment objective is the preservation of capital with reasonable growth until funds are needed. Investment opportunities shall be limited in scope similar to that of the state of North Carolina.

Legal counsel, certified public accountants, and banking institutions shall be the same as appointed by AE, unless there is a conflict of interest established.

NCGP shall commission an annual audit to be performed by a certified public accountant. An annual report of the corporation will be produced and published for public viewing as a PDF file on the NCGP website. A copy will be presented to the North Carolina Utilities Commission and to the NC Energy Policy Council.

Marketing

The marketing program consists of two levels of marketing campaigns. NC GreenPower will be responsible for a statewide public awareness and education campaign designed to inform citizens about the program and to encourage them to participate. NCGP will seek outside initial funding for the marketing campaign and will ultimately be funded by program proceeds and other contributions.

The second layer of the campaign will be the task of each of the participating utilities and is designed to inform their customers how to participate. Each utility will design and fund its own campaign to be coordinated with NCGP. Messages will be developed that utilities can use to co-brand the program in their own campaigns. It is expected but not mandatory that these utility campaigns will be coordinated with the statewide awareness campaign in order to maximize the marketing efforts of each.

The marketing campaign will target different groups, with different materials and messages for each. Communications to these groups will include a "core" NCGP message, but will be tailored to the motivations and information needs of that particular group. The format of the message is important to ensure that it can be easily passed along.

While the two products being offered are now referenced as the "mass-market product" and the "large volume product," they will be formally named before being marketed.
The target groups include large corporations, which will be approached early with an opportunity to act as endorsers of the program. They will be urged to participate in the NCGP program as well as promote the program to their employees. Other targets include government agencies; colleges, universities and other institutions; commercial and industrial customers; residential customers; environmental/consumer advocate groups; and school children.

Three key messages have been developed as the basis for the marketing campaign: Green power is good for the environment, it provides customers with a renewable choice, and it accelerates the development of new clean energy technologies and industries.

The statewide awareness campaign will take advantage of all free and inexpensive sources of publicity, as well as affordable utilization of all media. Industrial and commercial organizations can qualify to use a symbol that indicates their participation.

Market research exists that will help with the development of the marketing plan. Most of these studies focus on the demographics of participants in green power programs. NCGP may do further market research to determine what motivates people to participate and also what prevents them from participating.

Ongoing marketing is critical to ensure that the program, once launched, continues into the future. It is expected that free publicity will help initially, but after the program is established, other venues must be used to keep the public aware of the program and continue to grow the number of participants. A customer retention program is included in the general marketing plan.

Resources/Contracting (RFPs, allocations)
Green power sources of electricity will be identified and selected through the use of a Request For Proposals (RFP) process. This process will include an initial RFP to qualify legitimate green power suppliers followed by a more detailed RFP to define the power producers cost to produce the power, quantity of power to be produced, time period over which power will be produced and other information. Those responding to the RFP will be charged a fee commensurate with the level of generation they propose to provide. As stated earlier, the NCGP Board will have the authority to approve negotiations with producers if the use of RFP's is limited by too few available participants.

The RFP will be completed and will be ready for distribution following the approval of NC GreenPower by the North Carolina Utilities Commission.

Estimated Timetable

November 30, 2002	Filing of tariff by utilities and program plan by Advanced Energy
January 1, 2003	Ruling by North Carolina Utilities Commission
July 1, 2003	Effective date of NC GreenPower **
December 2003	Interim plan review by NC GreenPower Board
June 2004	Interim plan review by NC GreenPower Board
December 2005	NC GreenPower Results Assessment

**Effective date will be July 2003 or six months after the North Carolina Utilities Commission ruling and approval, whichever is later, as stated in the tariffs being filed by the utilities.

Accreditation
Advanced Energy, through the Advisory Committee, has pursued accreditation from a third party accreditation organization, Center for Resource Solutions (CRS) of San Francisco, California for the mass-market product, and certification of the large volume product from the Environmental Resources Trust (ERT) of Washington, DC. By seeking accreditation and/or certification, it is believed that NC GreenPower will be independently validated as being "green" for the benefit of consumers, further enhancing NCGP's marketability and success.

The process by which CRS required the program to be accredited was as follows. A North Carolina stakeholders' group was established and encouraged to participate in a series of accreditation meetings to determine the criteria (based on CRS's model) by which NCGP is to be guided. Once the stakeholders' group determined the criteria they would like to see in North Carolina, they submitted it to CRS. Once submitted, the CRS staff reviewed the criteria and recommended the NC criteria to the CRS Governing Board for approval. The CRS Governing Board has approved the criteria pending minor word changes. Additional monitoring, reviewing and verification processes will follow as NCGP proceeds.

NCGP will seek certification of all of its resources from ERT because it isn't known whether the producer's energy will be used in the mass-market or the high volume product when the producers are signing agreements.

Disclosure
It is imperative that the public be regularly informed of the progress of the program to reassure them that their participation in the program is making a positive difference in North Carolina. The utilities have stated that they would be willing to provide informational bill inserts and direct links from their web pages to a specific green power program site giving statewide generation mix of all utilities combined.

Results Assessment
The program will be formally reviewed after two years and the following items assessed:

Mass-market	Large Volume
Revenue	Revenue
Blocks or kWh sold	Blocks or kWh sold
Number of Participants	Number of Participants
Direct Contributions/Donations	Direct Contributions/Donations

Governmental Issues
No legislation would be required for implementation, but Public Utilities Commission approval is necessary. The program administrator will make annual reports to the Commission. NCGP will apply for a non-profit 501(c)(3) status.

NC GreenPower will not be in conflict with state, federal, and local regulations. NCGP is not intended to serve as a regulatory body.

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 90

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of		
Investigation of Voluntary Green	)	ORDER APPROVING
and Public Benefit Fund Check-Off	)	NC GREENPOWER
Programs	)	

BY THE COMMISSION: On November 22, 2002, Advanced Energy Corporation (AEC) filed a revised administrative and operational plan to implement, in conjunction with the utilities, a statewide, voluntary green power pricing program in North Carolina – NC GreenPower. Carolina Power and Light Company, Duke Energy Corporation, and Dominion North Carolina Power, in addition to several of the State's electric membership cooperatives, filed green power pricing tariffs to support the implementation of NC GreenPower.

As indicated by AEC, the revised NC GreenPower proposal now includes two products: (1) a "mass-market" product to be offered primarily to residential customers that is comprised of higher-priced renewable resources, and (2) a "large-volume" product to be offered to large-volume customers that is more price competitive in comparison to out-of-state green tags. The revised proposal also attempts to balance the interests of all stakeholders by narrowing the types of renewable resources included in the mass-market product while incorporating a broader spectrum of resources in the lower-cost large-volume product. AEC further states that although no single interest or representative group may be completely satisfied with the revised plan, it believes that the revised proposal comes much closer than the initial May 31, 2002, filing to gaining the necessary support for the program.

The Commission issued an Order on December 11, 2002, commending AEC, the utilities, and the diverse stakeholders in this proceeding for their work in together developing the NC GreenPower proposal. In that Order, the Commission stated that there appears to be considerable consensus and support for the revised plan and that it, therefore, was inclined to approve the revised NC GreenPower proposal and necessary utility tariffs and to allow the program to move forward to implementation. Lastly, however, noting that at least one issue, that of the use of wood waste in the large-volume product, remained contentious, the Commission allowed interested persons until December 31, 2002, within which to file dissenting comments on any aspect of the revised NC GreenPower proposal and utility tariffs.

Of the five comments received on or about December 31, 2002, three expressed support for the inclusion of biomass and waste wood energy facilities in the NC GreenPower proposal. (Comments of Tennessee Power Company, Craven County Wood Energy, and Green Power Energy Holding, LLC) Mr. Andrew Givens filed comments on January 17, 2003, encouraging the Commission "to act positively and promptly for the approval of the NC GreenPower program."

Hydromatrix Partnership Limited (Hydromatrix), a hydropower developer, filed dissenting comments with the following suggestions: (1) any consumer should be allowed to buy either product; (2) NC GreenPower should provide long term contracts to suppliers; (3) payments to the different supplier technologies should be controlled by the Commission; (4) small hydroelectric facilities should not be subject to Low Impact Hydro Institute (LIHI) standards in order to participate in NC GreenPower; and (5) capacity for hydroelectric projects should not be limited to 10 MW or less. Lastly, Hydromatrix objects to the large disparity between the amounts proposed to be paid to solar and wind versus other generating technologies.

In its comments, Appalachian Voices supports NC GreenPower and the inclusion of solar, wind and, initially, landfill or animal waste methane projects, but believes that conservation "must be the highest priority in NC GreenPower" and that energy efficiency "must also be an integral part" of the program. Appalachian Voices strongly opposes the development of hydropower and the inclusion of municipal solid waste, animal waste, or biomass incineration projects in NC GreenPower. In summary, Appalachian Voices recommends that the NC GreenPower proposal be amended as follows: (1) include conservation and efficiency measures; (2) maximize solar and wind projects over time; (3) minimize landfill gas, wastewater gas and animal waste gasification; (4) phase-out landfill gas, wastewater gas (if included) and animal gasification over time; (5) exclude all plant based material incineration; (6) require LIHI certification for all hydroelectric projects; (7) require the installation of maximum achievable control technologies; (8) exclude wastewater treatment facilities; (9) exclude animal waste facilities from the small-volume product; (10) allow North Carolina's environmental community to select its representatives on the Board of Directors; and (11) provide marketing and information materials designed to alert consumers of the environmental impacts of each technology used to produce NC GreenPower and the benefits and costs associated with both the large- and small-volume products.

With regard to many of the concerns raised by Hydromatrix and Appalachian Voices, the Commission notes that NC GreenPower is designed as a market-driven product in response to a perceived consumer demand. This has affected not only the prices set for the mass-market and large-volume products, the premiums expected to be paid to generators using different technologies, and the terms offered to renewable generators, but also other characteristics which distinguish the two products, such as the accreditation of each and the renewable resources included within each. These distinctions between the two products represent a carefully crafted balance among the diverse stakeholder interests participating in the development of the proposal. As noted by

the comments in response to the Commission's request, this has not been an easy process. Moreover, contrary to Hydromatrix's assertions, the Commission understands that NC GreenPower only intends to promote the mass-market product to residential and other low-usage customers in order to avoid public confusion.

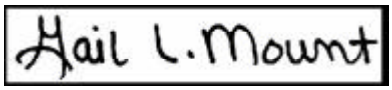
Therefore, after careful consideration, the Commission finds good cause to approve the revised NC GreenPower proposal, to allow the associated utility tariffs to become effective as proposed, and to designate AEC as the program administrator. The Commission respects the considerable consensus achieved through the stakeholder process and will allow the market for NC GreenPower and renewable generation to develop under the proposal as filed. Experience marketing the program and working with both consumers and generators will indicate where changes, if any, should be brought back before the Commission to be incorporated into NC GreenPower.

IT IS, THEREFORE, SO ORDERED.

ISSUED BY ORDER OF THE COMMISSION.

This the 28th day of January, 2003.

NORTH CAROLINA UTILITIES COMMISSION



Gail L. Mount, Deputy Clerk

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STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 90

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of		
Investigation of Voluntary Green	)	ORDER APPOINTING MEMBERS,
and Public Benefit Fund Check-Off	)	CHAIR, AND VICE-CHAIR TO
Programs	)	NC GREENPOWER BOARD OF
	)	DIRECTORS

BY THE COMMISSION: On January 28, 2003, the Commission issued an order approving NC GreenPower and appointing Advanced Energy Corporation (AEC) as the project administrator. Under the plan, AEC was to create a wholly owned non-profit subsidiary named NC GreenPower (NCGP) to be managed by a 19-member Board of Directors representing utilities, consumer/environmental advocates, green power technology, AEC, and the North Carolina State Energy Office. The approved NC GreenPower plan further provides:

> The North Carolina Utilities Commission shall appoint the green power technology members (from different technologies when available) and the green power consumer/environmental advocacy members. It is recommended to the Commission that the Environmental Representative on the Energy Policy Council be one of the five appointees to NCGP. Any NC resident may request that a name be put on the list considered by and appointed by the North Carolina Utilities Commission for appointment to the NCGP Board. The green power technology members and green power consumer/environmental advocacy members term appointments shall be for three years on a staggered schedule.

On February 11, 2003, the Commission approved requests by AEC that the size of the Board be increased to twenty-two (22), including seven members representing green power technology and six members representing consumer/environmental advocates, and that the Commission allow a two-week period for individuals to nominate themselves or others to be considered for appointment to the Board. The Commission also ordered AEC to identify the remaining nine Board members so that the Commission could appoint a Chair and Vice Chair. The deadline for submitting nominations was subsequently extended to March 3, 2003.

The Commission is impressed with the quality and quantity of nominations received, noting that twenty-nine (29) highly-qualified people were nominated for the thirteen (13) available Board positions. We further note that any of the nominees would have served NC GreenPower well. After careful consideration of the nominees and their qualifications, the

Commission appoints the following persons to the Board of NC GreenPower for terms expiring on September 30 of the year indicated:

representing consumer/environmental advocates:

Richard Harkrader (2004),
Cynthia Prince (2004),
Dr. Stephen A. Johnston (2005),
Michael Shore (2005),
William G. Laxton (2006), and
Evelyn Mattern (2006);

representing green power technology:

Stephen S. Kalland (solar, 2004),
William H. Lee (hydro, 2004),
Matthew Meares (wind, 2005),
Timothy M. Beaver (landfill methane, 2005),
Walter Pelletier (poultry waste, 2005), and
Garth Boyd (hog waste, 2006), and
Wade Bennett (agricultural/wood waste, 2006).

Finally, the Commission appoints Robert H. Goodson as Chair and Richard Harkrader as Vice Chair of the NC GreenPower Board of Directors, respectively.

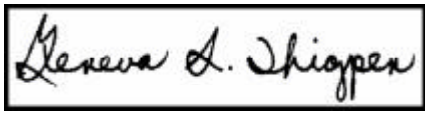
The Commission appreciates the tremendous interest in NC GreenPower and thanks all who were willing to serve at this important time to develop a successful statewide program. Although not everyone could be appointed to the Board initially, opportunities will arise to serve NC GreenPower on the Board and in other capacities in the future. We sincerely hope that those not selected for the Board at this time will continue to support the program and will consider reapplying as Board members' terms expire.

IT IS, THEREFORE, SO ORDERED.

ISSUED BY ORDER OF THE COMMISSION.

This the 11th day of March, 2003.

NORTH CAROLINA UTILITIES COMMISSION



Geneva S. Thigpen, Chief Clerk

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STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 90

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of Investigation of Voluntary Green and Public Benefit Fund Check-Off Programs	)))	ORDER REQUESTING COMMENTS

BY THE COMMISSION: In January 2001, the Study Commission on the Future of Electric Service in North Carolina (Study Commission) requested the Utilities Commission to investigate and report on the creation of voluntary “green” and “public benefit fund” check-off programs. In March 2002, the Commission submitted to the Study Commission an Interim Report Regarding Investigation of Green and Public Benefit Fund Voluntary Check-Off Programs.

Section 6 of Session Law 2002-167 (H 1215), which was ratified by the General Assembly on October 3, 2002, and signed into law by the Governor on October 23, 2002, directs the Commission to supplement its report to the Study Commission as follows:

> SECTION 6.(a) The North Carolina Utilities Commission shall include the following additional items in the study it is presently conducting for the Commission on the Future of Electric Service in North Carolina referred to as “Investigation of Green Power and Public Benefit Fund Voluntary Check-Off Programs”:
>
> (1) Identification of funding mechanisms in addition to voluntary purchase of green power blocks that would stimulate green power production in the State.
>
> (2) Identification of incentives in addition to funding mechanisms that would stimulate green power production in the State.
>
> (3) Identification of barriers that would impede green power production in the State and strategies to address those barriers.
>
> (4) Identification of appropriate methods of promoting the purchase of green power by the various electric customer groups.
>
> (5) Identification of methods whereby the State can provide incentives and resources that would stimulate the production and use of green power that would protect water quality; promote water conservation and water reuse; protect air quality; protect public health, safety, welfare, and the environment; and provide for the safe and efficient disposal of animal waste in the State.

SECTION 6.(b) In making recommendations to address the additional items listed in subsection (a) of this section, the North Carolina Utilities Commission shall consider the impact of its recommendations on residential, commercial, and industrial consumers of electricity in the State.

SECTION 6.(c) The North Carolina Utilities Commission shall make its final report on its investigation of green power and public benefit fund voluntary check-off programs, including the additional items set forth in subsection (a) of this section, to the Commission on the Future of Electric Service in North Carolina and the Environmental Review Commission not later than 15 March 2003. The delivery of this report shall not preclude either of the receiving commissions from asking for additional information or reports on these subjects.

To assist in developing recommendations and preparing its report, the Commission seeks comments and reply comments on the various issues raised by Section 6 of Session Law 2002-167 (H 1215).

IT IS, THEREFORE, ORDERED as follows:

1. That interested persons not already a party to this docket may petition to intervene as parties under Commission Rules R1-5 and R1-19 on or before December 13, 2002;

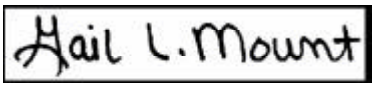
2. That parties may file written comments on the various issues raised by Section 6 of Session Law 2002-167 (H 1215) on or before December 13, 2002, and may file written reply comments on or before January 15, 2003; and

3. That the Clerk shall send a copy of this order to the Secretary, Department of Environment and Natural Resources; Secretary, Department of Administration; and Director, State Energy Office.

ISSUED BY ORDER OF THE COMMISSION.

This the 30th day of October, 2002.

NORTH CAROLINA UTILITIES COMMISSION



Gail L. Mount, Deputy Clerk

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STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 90

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of Investigation of Voluntary Green and Public Benefit Fund Check-Off Programs	))))	ORDER EXTENDING DEADLINE FOR FILING INITIAL COMMENTS AND SCHEDULING INFORMATIONAL PRESENTATION

BY THE COMMISSION: On October 30, 2002, the Commission issued an order in the above-referenced docket requesting comments and reply comments on the various issues raised by Section 6 of Session Law 2002-167 (H 1215). Initial comments were ordered to be filed on or before December 13, 2002; reply comments on or before January 15, 2003.

In response to several oral requests, the Commission finds good cause to extend the deadline for the filing of initial comments. The Commission also finds good cause to schedule an informational presentation by the utilities and other parties filing comments to assist the Commission in developing recommendations and preparing its report to the General Assembly.

IT IS, THEREFORE, ORDERED as follows:

1. That the time for parties to file written comments on the various issues raised by Section 6 of Session Law 2002-167 (H 1215) be, and the same hereby is, extended to and including December 20, 2002; written reply comments may still be filed on or before January 15, 2003; and

2. That an informational presentation before the Commission by the electric utilities and other parties filing comments be, and the same hereby is, scheduled for Monday, January 27, 2003, at 2:00 p.m., in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina.

ISSUED BY ORDER OF THE COMMISSION.

This the 10th day of December, 2002.

NORTH CAROLINA UTILITIES COMMISSION

Gail L. Mount, Deputy Clerk

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LIST OF ITEMS IDENTIFIED IN RESPONSE TO EACH SPECIFIC REQUEST IN SECTION 6 OF H1215

Listed below are the specific recommendations of ways to stimulate renewable energy production in North Carolina that were identified by the parties in their comments in this proceeding in response to each request in Section 6 of H1215..

§ 6.(a)(1). Identification of funding mechanisms in addition to voluntary purchase of green power blocks that would stimulate green power production in the state.

- That the State participate in NC GreenPower to purchase a portion of its energy requirements from renewable energy resources.
- That the State use the Clean Water Management Trust Fund to finance the development of alternative energy services that would improve water quality.
- That the State implement a mandatory, non-bypassable public benefit fund (PBF).
- That the State require utilities to resume funding energy research and development, renewable energy projects, and energy efficiency, as they did before the threat of competition arose.

§ 6.(a)(2). Identification of incentives in addition to funding mechanisms that would stimulate green power production in the State.

- That the State develop public recognition and awards programs to promote green power.
- That the State offer low-interest loans to renewable energy suppliers.
- That the State implement a renewable energy grant program.
- That the State offer additional tax credits and tax incentives related to renewable energy, including consumer participation in NC GreenPower.
- That the State exempt renewable energy systems from property tax.
- That the State implement a renewable portfolio standard (RPS).
- That the Commission increase avoided cost rates.
- That the Commission require utilities to offer 15-year avoided cost contracts to renewable power producers.
- That the Commission consider environmental externalities in its annual integrated resource planning (IRP) process.

- That an entity with a vested interest in renewable energy development carry out a sophisticated public education and awareness campaign.

§ 6.(a)(3). Identification of barriers that would impede green power production in the State and strategies to address those barriers.

- The high cost of renewable power as compared with power produced from fossil and nuclear fuel.
- The lack of an RPS.
- The Mountain Ridge Protection Act of 1983, which constitutes a barrier to wind power development.
- The lack of public education and awareness of renewable technologies.
- The lack of a net metering rule in North Carolina.
- The lack of clear statewide interconnection standards.
- The lack of standard contractual arrangements for renewable generators with less than 20 megawatts of capacity.
- The unavailability of 15-year avoided cost contracts for renewable generators.
- The Commission's existing regulatory philosophy, characterized by the NCSEA as a "path dependent" approach, that places excessive emphasis on protecting older investments in the utility system.

§ 6.(a)(4). Identification of appropriate methods of promoting the purchase of green power by the various electric customer groups.

- That the NC GreenPower marketing committee take responsibility for marketing the program and the purchase of green power to potential customers.
- That State government and universities promote the purchase of renewable energy through their participation in NC GreenPower.
- That the Commission require electric utilities to contribute to the NC GreenPower marketing effort.

§ 6.(a)(5). Identification of methods whereby the State can provide incentives and resources that would stimulate the production and use of green power that would protect water quality; promote water conservation and water reuse; protect air quality; protect public health, safety, welfare, and the environment; and provide for the safe and efficient disposal of animal waste in the State.

- That North Carolina State University continue its investigation of animal waste-to-energy systems.
- That municipalities capture the methane produced by sewage systems and use it for power generation.
- That the State encourage farmers to participate in green power generation.
- That the State utilize the expertise and interest of its electric membership corporations (EMCs) in green power.
- That the State use funds from a PBF to build demonstration projects in agricultural areas, buy down the capital costs of farm-based generation, and support research on combined heat and power production.
- That the State take advantage of the funds available under the recently enacted federal farm bill.
- That the State allow energy produced from biomass to be used to satisfy the requirements of an RPS.