

## Program Plan

### Revised and Updated

August 1, 2011

### 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 and the mitigation of greenhouse gas emissions through consumers' voluntary funding of carbon offsets. The program revenues will help provide financial incentives for generators of electricity from renewable sources and for developers of projects mitigating greenhouse gas emissions.

### Objectives

The objective is to use a statewide marketing and communications campaign to promote a simple and easy option for all electric customers to promote the use and development of green power generated in North Carolina and to promote the mitigation of greenhouse gasses. NC GreenPower is good for North Carolina's environment and it offers consumers a choice.

The five main objectives of the program are to:

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

### Program

NC GreenPower offers renewable energy credits and carbon offsets. A renewable energy credit is a subsidy paid to a generator for delivering electricity from renewable resources as opposed to traditional resources such as coal. A carbon offset is a subsidy paid to a project owner or purchased from the market for reducing or mitigating greenhouse gas emissions.

All the electric utilities in North Carolina participate in the program: Carolina Power & Light (dba Progress Energy), 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 continue to receive electric service from their local utility and pay for energy used under the utilities' applicable rate schedules. In addition to that cost, the contracted block(s) of renewable energy or carbon offsets provided under NCGP is charged at the program's rate irrespective of the customer's actual monthly kilowatt-hour usage. Block charges for the program are used by NCGP to offset the higher cost of producing, purchasing, and/or acquiring the renewable resources or carbon offsets and for the marketing and administration of the program.

For the renewable energy products, NCGP pays a premium only to those generation suppliers that qualify to receive a power purchase agreement from a North Carolina electric utility. NCGP uses 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 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 or the amount of carbon mitigated 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.

### **Renewable Energy Credit (REC) Products**

Each participating utility offers its customers the voluntary option to subscribe to available tariffs to support renewable energy. The tariffs offer customers the opportunity to subsidize the delivery of blocks of renewable energy to the electric grid. Each block of renewable

energy subsidized authorizes 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.

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

Some renewable energy resources that are currently providing energy to the grid may be 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. 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 renewable energy credits 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 per current utility tariffs), 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, 1997. 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

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 (per current utility tariffs) and to assist existing green power producers. The large volume consumer does not have to purchase the large volume product if they perceive additional value by purchasing the mass-market product.

Therefore, per the current tariffs, for the \$4 per block premium paid to NC GreenPower for the mass-market product, a consumer will be subsidizing 100 kWh of green energy from new solar,

wind, and methane. Also, per the current tariffs, for the \$2.50 per block premium, the large volume consumer can subsidize all biomass, small hydro, solar, and wind renewable resources. The products will be accredited or certified by a third party green power certifying entity.

### **Carbon Offset Product**

Each participating utility offers its customers the voluntary option to subscribe to available tariffs to support carbon offsets. The tariffs offer customers the opportunity to subsidize the mitigation of carbon. These carbon offsets will be offered by each participating electric utility in North Carolina on a monthly basis for a premium. Each block of carbon offset subsidized will authorize the program administrator to pay a premium to a project owner or from the market for an equivalent block of carbon mitigated. The proposed price for the carbon offset product is \$4 per 1000 pounds of carbon.

For the carbon offset product, projects will mitigate carbon, not provide electricity to the grid. Priority will be given to the participating utility service territories in NC, SC and VA for acquiring carbon offsets; however, if no acceptable carbon offsets are available, other regions will be considered. NC GreenPower intends to adopt nine quality criteria for offsets originally developed by Environmental Defense Fund.

#### NC GreenPower's Carbon Offset Quality Criteria

- 1) No RECs
- 2) Additionality
- 3) Accurate Quantification
- 4) Clarity on Permanence
- 5) Appropriate Timeline
- 6) Demonstration of Ownership
- 7) Serialization and Tracking
- 8) Verified and Verifiable
- 9) Net Positive Impact

The intent is to purchase carbon offsets and then offer them to the market. In case NCGP must follow the REC model of collecting funds, then making purchases, the carbon offset product will have a two-year true-up period, which mirrors the REC product.

## **Renewable 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 for the sale and delivery of energy to the utility. The green power producer will also be required to enter into a contract with NCGP for participation in the NCGP program, including receipt of premiums subsidizing renewable energy delivered to the grid. NCGP’s green power resources will be qualified resources of generation from new and existing developments. The mass market product does not include any existing resources.

**Small Hydro:** Any new small hydro facilities that desire to be eligible for the mass market product 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 makes a concerted effort to maximize the inclusion of these resources in the NCGP program. Both siting and pricing issues continue to be hurdles for these resources. NCGP's ability to maximize the use of these technologies 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 (15¢/kWh for solar and 6¢/kWh for wind). These maximums are subject to be adjusted by the NCGP Board of Directors. Once the NCGP program is operating, the NC GreenPower Board may explore including metered domestic solar thermal systems (i.e., hot water heaters).

### **Project and Resource Selection/Contracting (RFPs, allocations)**

Carbon offsets and green power sources of electricity will be identified and selected through the use of a Request For Proposals (RFP) process. The NC GreenPower Board has the authority to change this process or as stated earlier, the Board has the authority to approve negotiations with producers if the use of RFP is limited by too few available participants. The NCGP Board may also elect to select renewable resources or carbon offsets from registries such as the Greenhouse Gas Registry operated by Environmental Resources Trust.

### **Brokered Bids**

The Brokered Bids option for NCGP provides customers interested in annually spending \$15,000 or more on renewable energy credits or carbon offsets with a more competitive North Carolina option. In this option, NCGP accepts bids for renewable energy credits on a continual basis. Generators complete an application with pertinent project information, a bid amount and a date through which the bid is available. The generator's bid is marked up to cover marketing and administrative (M&A) expenses. These bids create a portfolio of available renewable energy credits or carbon offsets to better compete with the open market. Those customers interested in the minimum purchase criteria above have access to the portfolio and can select a piece of a project, a project or multiple projects of interest to them that is within their price range. NCGP would essentially serve as a broker between the bidder and the NCGP customer to facilitate an offer and payment through NCGP. Annual prepayment of any transaction may be required for this option.

### **Customer Participation**

The participating utilities are 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 carbon offset or renewable energy per month.

Under the large volume renewable energy product, the customer must be committed to purchase at least 100 blocks per month. Customers have an option to increase or decrease the number of blocks of green power..

The participating utilities provide their own resources to fulfill their role in enrolling, billing and collecting premiums from customers in NCGP. The utilities help market the program by including informational bill inserts. In addition to forwarding to NCGP the collected revenues on a monthly basis, the utilities will also be responsible for providing NCGP with monthly and annual totals, by residential and non-residential customer groups and by carbon or renewable energy. The NCGP participating utilities will assist with fulfilling disclosure requirements required by law or accreditation standards.

NCGP also accepts direct contributions from the public.

#### Governance

Advanced Energy (AE) created a non-profit named NC GreenPower, which acquired 501(c)(3) non-profit status. AE's Board of Directors is the legal members of NC GreenPower. AE's Board, which is composed of one legislative member, one Executive Director member, 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. AE is, in turn, governed by members of the NC Utilities Commission.

NCGP's Board of Directors consists of 24 members. The following are members of the NCGP Board:

- 2 AE Board of Directors members (only Public Members qualify and the Treasurer of AE's Board will fill one of these seats)
- 5 North Carolina Utility members
- 7 NC GreenPower Technology members
- 6 NC GreenPower Consumer/Environmental Advocacy members
- 1 Director of North Carolina State Energy Office
- 1 President of AE
- 1 Corporate Client
- 1 NC Department of Environment and Natural Resources

The Treasurer of AE's Board serves as Treasurer for the Board of NCGP to provide consistent financial controls. The Chair of the AE Board appoints 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 each have a representative on the NCGP Board. The President of the utility being represented will appoint the Board member.

The North Carolina Utilities Commission appoints the green power technology members, (from different technologies when available) and the green power consumer/environmental advocacy members. 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 are 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 were initially appointed by the North Carolina Utilities Commission. Thereafter, the Chair and Vice Chair are selected by a nominating committee from the current Board and appointed after the approval of the Board.

There is an Executive Committee for the NCGP Board. The Executive Committee members consist of a Chair of the Board, Vice Chair, Secretary, Treasurer, and member-at-large. The State Energy Office Director serves 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 AE President and Vice President of Administration serve as officers of the NCGP Corporation in the same capacity as for AE.

The Board meets at least twice per year and annually reports its activities to the AE Board and to the North Carolina Utilities Commission. This annual report coincides with the time and day of Advanced Energy's annual report to the North Carolina Utilities Commission.

### **Administration** (costs, reserve fund, budget, legal and accounting)

NC GreenPower has an arrangement with Advanced Energy (AE) for AE to provide the personnel and services necessary to carry out the objectives of NCGP.

Accounting is on an accrual basis and in accordance with Generally Accepted Accounting Principles. An annual budget for Operations, Contingency Funds and Program Related Expenses is prepared by staff and the President and submitted to the Board for approval. NCGP commissions an annual audit to be performed by a certified public accountant.



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 are limited in scope similar to that of the state of North Carolina. Legal counsel, certified public accountants, and banking institutions are the same as appointed by AE, unless there is a conflict of interest established.

## Marketing

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

The second layer of the campaign is the task of each of the participating utilities and is designed to inform their customers how to participate. Each utility designs and funds its own campaign to be coordinated with NCGP. Messages are 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 targets different groups, with different materials and messages for each. Communications to these groups include a “core” NCGP message, but are 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.