City of Cape May
Cape May, NJ

Date: July 24, 2008

To: Jeanne Fox, B.P.U.

From: Bruce MacLeod, Interim City Manager
Edward Mahaney, Mayor
City Council: Neils Favre, David Kurkowski,
Terri Swain-McBrearty, Linda Steenrod
And: Cape May City's Energy Committee

D. Kurkowski	City Council
C. Todd	Environmental Commission
B. MacLeod	Finance
M.A. Gaffney	Historic Preservation Commission
H. Shuler	Planning Board
T. Swain-McBrearty	City Council
And K. Maloney	Taxpayers Association
J. Tolley	Cape May City School Board

The State's first priority must be to promote energy efficiency as aggressively as possible to reduce overall statewide energy demand. Energy efficiency is the cheapest and fastest strategy available to meet the State's global warming reduction goals. At minimum, we should exceed the State's goal of a 20% reduction of projected demand by 2020.

However, RENEWABLE ENERGY sources must and should take priority status immediately. Financial incentives, from the State, require ambitious and aggressive implementation to suit all phases of Renewable Energy adoption. Increase financial assistance to local governments, schools, businesses and individuals.

To this end:

We value and propose that Cape May City promote itself nationally as a Model Green City by:

- increasing energy conservation awareness
- instituting educational programs from K-12 in our schools and Audubon Nature Center
- lessening our dependence on fossil fuels
- reducing our Carbon Dioxide emissions levels
- identify, research and evaluate alternative renewable energy sources
- selecting and installing appropriate alternative renewable energy systems, including solar and wind generators

- adopting new ordinances, based on LEED criteria, to enable both new and reconstructed sustainable green buildings to be accepted
- increase recycling quotas to be in the top percentages of State goals
- encourage all in Cape May to park and walk or bike ride
- we have "Tree City" status and try to establish native plant gardens
- implement local public transportation (electric) trolley service
- requesting and participating in smart metering and smart rate structuring from our electric supplier
- creating and supporting renewable energy alliances with our neighbors and local universities; as well as state and federal agencies
- expediting –
    - retrofit all municipally owned buildings with CFL light bulbs
    - Feit Electric, A.C. Electric, Energy Star rated appliances, with numerous state funded rebate programs
    - Completing a municipal energy audit with the goal of becoming 100% self-sustaining (off-grid) during the non-peak tourist season
    - retrofit and purchase traffic lights using LED (light emitting diodes)
    - formulate ways to encourage City employees to buy green products, including F.S.C. certified hardwood
    - purchase green fleet vehicles
    - recapture energy from our desalination plant
    - reusing gray water from our waste water treatment plant for irrigation
    - building code to require 'tankless' domestic hot water systems
    - building code to require a minimum 1KW PV Solar electric System
    - building code to increase 'R' Factor by 10%
    - adopting a renewable energy Ordinance to include Solar & Wind Electric Generation Systems

Our accomplishments:

- August 2007 – Mayor of City of Cape May signed onto "The U.S. Mayor's Climate Protection Agreement."
- Listed as a "Cool City" by BPU – as such, we received honorary plaques

1. Recognizing participation in Change a Light effort
2. Outstanding achievement in Clean Power Choice program
3. Grant for The Nature Center of Cape May, N.J. Audubon Society, to increase energy education efforts

Thus, committee efforts to define Cape May City as a green role model motivate us, the stakeholders, to respond to the proposed state Energy Master plan.

We concur that Conservation and Energy efficiency be given priority status as outlined by the proposed Master Plan.

We endorse:

Massive educational efforts and implementing energy efficiency actions under Goal 1 will assist in reducing peak demands as they reduce overall energy consumption.

Education and Public Outreach

"The BPU will create a partnership of representatives from utilities, businesses, environment, academia, county/municipal/state governments, K-12 educators, and consumer advocacy groups. This group will review existing education efforts in the public and private sectors and recommend an ongoing mix of education program and resources to help New Jersey achieve its energy efficiency goals."
(pg. 56 Draft)

"Every citizen of the State needs to know the importance of the energy decisions that are made and how they impact the Stat's economy and environment. Improving the information that is provided to students and adults should allow for greater utilization of the energy efficiency opportunities that each person can utilize to save on their energy costs and reduce their carbon footprint." (pg. 56 Draft)

We, the Cape May City Energy Committee, think that portion of Goal 1 needs huge endorsement – a media blitz campaign daily – and universally through all visual opportunities – Internet, TV, billboard, etc.

Strong programs and policies to significantly reduce energy demand while expanding clean generation will eliminate the need to build new traditional power plants. Resources can be diverted to assessing the State's existing fleet and minimizing plants' environmental and public health and safety impacts.

Some of the Cape May City Energy Committee supports continued investigation into the feasibility to construct one additional in-state nuclear power plant. If this were to happen, we look for it not to be in heavily populated areas and for it to be built with additional safeguards. We are opposed to increased fossil fuel use; including gas fired peak and coal liquefaction plants.

GOAL 2: Reduce peak demand for electricity by 5,700 MW by 2020.

We, the Cape May City Energy Committee, think that:

In addition to curbing demand, the State should maximize renewable energy potential by setting strong and visionary goals for renewable energy adopting renewable technologies as swiftly as possible.

The plan should address energy use and emissions from the transportation sector.

Transportation emissions account for roughly half of New Jersey's greenhouse gas emissions. While the energy master plan does not address transportation, significant advances in this sector must be made by 2020 to meet the State's long-term global warming reduction goals.

GOAL 3: Meet 22.5% of the State's electricity needs from renewable sources.

Please adopt the following Straw Proposal for CRA: 2009-2012 funding years.

STRAW PROPOSAL for the CRA: 2009-2012 funding years

1. **Maintain or increase the proposed funding for wind as outlined in the Straw Proposal.**

RENEWABLE ENERGY (RE): this is open to all energy consumers, but is restricted by investment cost and environmental impact. The reach of solar is more widespread because of availability both to purchase and install. Projects can be in almost any size or capacity. Less obtrusive, and if installed on a rooftop takes no land mass. Wind energy is a more costly investment and presents greater environmental concerns as well as neighborhood impact. Biomass is limited to commercial or governmental operators.

Current Incentives: rebates, srec(s) & wrec(s), and tax credits

Funded: Societal benefit charge (SBC), State of NJ

The level of funding and incentives should not be decreased during the next CRA period. The solar program appears to have been successful reaching a point where the quantity of rebate applications exceeded the State's ability to process and approve them. This bottleneck delayed the installation of new alternative energy resources. The public opinion is favorable, and it is the program with the most far reaching potential on a property-to-property basis (residential or C&I) for installation. Now is not the time to take incentives away. Rather, the State should be promoting this success story.

Renewable wind energy should be promoted to the C&I and government sector. Government facilities, schools, corporate and industrial centers form the group

of largest consumers of energy. Also, this group can initiate investments in wind energy, which in most cases is probably beyond the reach of the residential energy consumer. The government sector can be a willing partner in wind energy. Financing is costly, and will be paid through tax dollars, municipalities are able to bond capital cost and repay the debt over a number of years. To accelerate the participation of municipal government into wind energy other incentives besides rebates and wrec(s) should be considered such as:

- Adopt statutes to waive down payments on bond ordinances for alternative energy
- Create a fund for "no or low" interest loans
- Provide assistance for professional technology services
- Make the permitting process less strenuous
- No permit fees as an incentive
- Create opportunities to incorporate education and monitoring of wind turbines on school properties

Getting alternative energy resources installed and operating is the only win-win. An allocation of 256 million for wind energy per year is not enough. A single wind turbine depending on size will cost between $700,000.00 and $3,000,000.00. An initial 20% rebate on the less expensive wind turbines would produce 178.5 installed units. At the end of three years that would still be less than one unit per municipality in the State of New Jersey, and does not count any6 school districts. The opportunity to create alternative energy feeding any public facility is a savings to the taxpayer of the State of New Jersey. In addition, the reduced impact on greenhouse gas should be significant because the new alternative energy will be supplying some of the largest municipal or public buildings (libraries, courts, town halls, schools) and other facilities such as water and sewer plants.

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GOAL 4: Develop new low carbon emitting power plants and close the gap between the supply and demand of electricity.

We, the Cape May City Energy Committee, fully support the development of small on-shore wind energy systems and large off-shore wind parks.

However, it has come to our attention that recommendations from agencies such as; New Jersey Fish and Wildlife are recommending to the

Department of Environmental Protection, tremendous restrictions to the use of wind power in the lower ten kilometers of Cape May County. Regulations are not yet final, thus B.P.U. should be aware and be prepared to turn around the prohibitive challenges that N.J.F.&W. are creating to block the use of wind power in a richly kinetic resource area. Their proposals should be carefully examined and rejection considered.

Our understandings are that this agency is submitting requests to potentially force Cape May County communities to build lower turbines, with then a requirement to erect two or three times as many to satisfy the power generated by one taller wind system. Does this seem appropriate in terms of the issue of protecting birds, bats, etc? Smaller, faster turbines equal potentially more air space and more dangers being considered. Atlantic City's turbines have met outstanding goals. These taller and slower spinning blades are appropriate for avian species.

Furthermore, N.J.F.&W. have not yet documented, in a scholarly way, studies, such as radar use, to track bats. Yet they indicate that their proposed regulations must be adopted. In essence, they submit no documented avian evidence, but they would require others, who would propose the use of wind, to pay for such studies.

Therefore, we strongly urge BPU to intercede with N.J.F.&W.'s resistance to the use of wind as a renewable energy source.

Respected environmental groups are endorsing wind systems. Consider, for example, the following ANJEC White Paper Endorsement.

The following article by Julie Lange Groth, ANJEC Resource Center Director:

"Small Wind Systems Can Generate Big Savings

Wind energy offers enormous potential to lessen the world's emissions caused by burning fossil fuels. In 2005, installed wind systems in the United States generated enough electricity to power 2.3 million average American households, and an additional 2,454 MW of capacity was installed in 2006, bringing the nation's total installed capacity to 11,603 MW.

Small wind systems, designed to generate up to 100 kW, currently account for a very small portion of that capacity, but the US market continues to grow at 14 to 25 percent annually. About 6,800 small wind systems were sold in the US in 2006 and either connected to the public power grid or used in stand-alone applications such as agriculture. Tower heights range from 30 to 140 feet, although the average height is about 80 feet.

The average wind speed throughout most of New Jersey is insufficient to make large-scale wind generation practical. But a 10 kW small wind turbine on a 120-foot tower can easily generate most of the 14,000 kWh per year used

by a typical New Jersey household while providing a hedge against rising energy costs, according to Frank DeWitt of Alternative Energy Associates.

According to a 2007 market study by the American Wind Energy Association, the two leading barriers to development of small wind energy systems are economics and restrictive zoning.

Incentives Make Wind More Cost Effective

While much of New Jersey has sufficient wind to support small wind installations, the high up-front cost remains a major obstacle for many would-be purchasers. Systems cost from $3,000 to $5,000 per kW of generating capacity, or about $40,000 for a 10kW installed system. While this is much cheaper than solar panels, the payback period would still be six to 15 years if there were no financial incentives to offset the cost.

Fortunately, available incentive programs can help make small wind investments more attractive in New Jersey, assuming the site has good wind resources.

- To assess the wind potential of a site prior to installing a small wind system, the NJ Office of Clean Energy and Rowan and Rutgers Universities offer residents free use of a measurement tool through the Anemometer Loan Program.
- The New Jersey Clean Energy Program offers $5 per watt up to a maximum of 60 percent of the overall installation, equipment and interconnection costs of systems under 10 kW. The incentive amount decreases incrementally with larger capacity systems.
- The US Department of Agriculture's Section 9006 Renewable Energy Systems Program assists farmers and small rural businesses with grants of $2,500 to $500,000 to cover up to 25 percent of the cost to install a renewable energy system.
- A state sales tax exemption for small wind systems may also be available. The Office of Clean Energy recommends that NJ citizens consult their accountant, tax preparer or tax attorney regarding their eligibility for this exemption."

GOAL 5: Invest in innovative clean energy technologies and businesses to stimulate the industry's growth in New Jersey.

"ACTION ITEM 1: Expand the Edison Innovation Fund to invest in innovative clean energy technologies including both energy efficiency and renewable energy manufacturing businesses to stimulate the industry's growth in New Jersey.

The Governor's Economic Growth Strategy has committed to aggressively encourage the expansion and creation of clean energy solutions, and highlights the clean energy technology sector as a cornerstone of the Edison Innovation Fund administered by the NJ Economic Development Authority (EDA) in

partnership with the NJ Commission on Science and Technology. Currently, New Jersey is home to over 500 environmental, energy, and engineering companies. With its skilled workforce and culture of innovation, New Jersey is well positioned to become a major participant in the clean energy technology sector.

We, the Cape May City Energy Committee, think alternative energy system manufacturing will grow exponentially in the coming years. In-state manufacturing, distribution and installation of alternative energy products and systems should include nuclear, solar and solar farms, wind and bio-mass. Recovering methane from sewage to produce electricity is another good alternative. In addition; there will be ever increasing demand for electric (plug-in) vehicles and research & development and manufacturing of components such as lithium-ion batteries will be great!

"**ACTION ITEM 2: Develop a "Green Collar" jobs program to ensure that sufficient numbers of New Jersey workers have the skills demanded by industry to fill the jobs that are created from the action items in this Master Plan.**

Meeting the Energy Master Plan's aggressive targets for energy efficiency, renewable energy, demand response, and new generation will require tremendous growth in the "green collar" jobs sector, from solar manufacturing and energy audits to HVAC installers and smart grid technology installations.

To meet this job demand, the State will need to grow its green collar local labor force. Curriculum alignment and workforce training will be an essential component to driving this development. In addition, because our urban centers are often centers for electricity congestion and industry, growing green collar jobs in our cities will plan an important part in meeting our goals." (pg. 75 Draft)

We, the Cape May City Energy Committee, think opportunities growing green jobs will be enhanced by supporting in-state manufacturing (see Action Item #1); coupled with our superior educational facilities.

To meet the State's ambitious 2020 global warming reduction goals, the energy master plan must be as bold and as visionary as possible. The progress that the State realizes over the next decade will influence the ability to meet the 2020 goals. The State should set strong benchmarks, ensure frequent review and updates, and demonstrate measurable yearly progress toward the goals outlined in the energy master plan.

AND, PUBLIC EDUCATION AND FINANCIAL INCENTIVES EVERY STEP OF THE WAY.

Thank you for your careful review of our comments, observations and recommendations.