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Dear Commissioner Fox and Mr. Miller,

As you know I attended most of the New Jersey Energy Master Plan meetings and have compiled the following comments on behalf of our organization.

Let me start by stating that we applaud the efforts of the Governor, the administration, President Foxx and Lance Miller for committing to this monumental endeavor that will set New Jersey on a course to reduce it's carbon foot printing as well as create a whole new "green" economy for New Jersey's future.

The creation and implementation of this energy master plan will be one of the most important plans ever created to bring energy security to the residents of New Jersey as well as secure a cleaner environment for the children of the "Garden State".

There are many challenges that humanity faces in this Global Warming crisis.

The most important challenge is clear. We must use technology to reduce demand for energy. We must repair and maintain our energy infrastructure and increase energy supply.

But most of all we need to change our habits about the way we make and use energy.

We must initiate an educational module for our school children about energy efficiency, energy conservation and environmental stewardship. This will help to perpetuate the changes that we must make now to save our Planet.

Today, the United States remains the world's undisputed technological leader, but recent events have demonstrated that we have yet to integrate 21st century technology into an energy plan that is focused on wise energy use, production, efficiency and conservation.

Our failure over the past several years to modernize our energy infrastructure, the network of transmission lines, gas pipelines and oil refineries that transports our energy to consumers and converts raw materials into useable fuels is the result of the lack of careful planning and lack of a comprehensive national energy plan.

New Jersey has taken this step and I commend you!

United States energy consumption is projected to increase by 32% by 2020. New Jersey has set aggressive goals in your 20 X 2020 plan. However, recent issues with your states Solar rebate program and an SREC program that needs securitization has drastically impeded the Solar market in your state this year.

Alternative energy projects all across America have slowed to a halt because they are being held hostage by the impending expiration of the Federal ITC Credit.

Scientists have proven that we have under 10 years to reverse the effects of Global Warming before we reach the “tipping” point.

Herein lies the major problem. It can take new power plants and transmission facilities years to site, permit and construct. So what are the answers?

Our nation's most pressing long-term electricity challenge is to build enough new generations and transmission capacity to meet projected growth and demand.

What we must do first and foremost is represented in the NJ EMP as goal one. Supporting the first renewable energy source: Energy efficiency and energy conservation. The National Green Energy Council agrees with **GOAL 1: Maximize energy conservation and energy efficiency.**

There are 3.7 million existing buildings in the state of New Jersey. What an amazing place to begin with educational outreach to businesses and homeowners throughout the state.

Energy conservation is the most cost-effective and practical way to address the state's energy needs. Not only does it lower consumers' costs by reducing their energy consumption, but it also avoids the far more expensive prospect of building costly new power plants and transmission lines to meet rising demand. And it helps reduce congestion on the region's already-overloaded power grid.

The GEC agrees that reducing energy consumption through conservation and energy efficiency is the most cost-effective way to help close the gap between supply and demand, lower energy costs, increase reliability, and lower the state's contributions to global warming and other air pollutants.

#### **Additional comments on Goal # 1:**

- Redesign and enhance the State's current energy efficiency programs in all sectors of the economy to achieve the desired results while remaining cost-effective. This redesign will emphasize a whole building approach to energy efficiency.

The GEC suggests that New Jersey keep an open mind that in a questionable real estate economy going “green” in development should be an educational outreach and a gentle persuasion instead of a regulatory mandate toward any **ONE** green building standard

- Increase energy efficiency in new buildings with a statewide building code that will make new construction at least 30% more energy efficient than buildings

The GEC suggests that most existing codes can evolve to incorporate green building practices and products. We suggest that the state not create a separate green building code. However, if the state were to decide that this was a necessity, we suggest a very early and open dialogue with the NJ Builders Association.

Increase energy efficiency in existing buildings through enhanced energy efficiency standards for new appliances and other types of equipment currently not covered by existing standards by 2009.

The GEC agrees with this action plan item

- Increase awareness about the importance of energy conservation and energy efficiency upgrades by developing an education and outreach program for the public. This will result in a shift in the way the state's consumers think about, and use energy.

As an educational organization this action plan item is the most important in the eyes of the GEC. A swift and immediate educational outreach program should be implemented immediately to school children in New Jersey. Children are the key to gain parental awareness of the Global Warming crisis and an amazing rippling effect becomes evident when children share what they have learned about their environment in the classroom.

Outreach and education efforts should strive to reach across all socio-economic levels, cultures, and age groups

Our organization is currently working with New Jersey and the administration for our organization to become the facilitator of this educational initiative using New Jersey as a pilot program for our Educational Initiative for the nation.

Finally, we are particularly encouraged by the public outreach objectives which we believe will ensure that energy conservation and efficiency will be addressed at every level of education as well as in both public and private sectors. It is of paramount importance that all citizens be made aware of the impact they can have by changing their habits on the way they use energy and that by making minor changes to their energy use behavior can have serious positive effects in helping New Jersey become a more energy conscious state as well as aid in reversing the effects of Global Warming.

### GEC Comments on Goal # 3

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

Under regulations already in place, such as New Jersey's current Renewable Portfolio Standard, renewable energy sources would generate 16,000 GWh of our electricity by 2020, including nearly 1,500 GWh from solar.

*This electricity is projected to come from 900 MW of biomass capacity.*

The GEC believes that this number can be substantially increased. Our suggestion would be to double the number to 1800 MW of Biomass capacity.

*At least 1000 MW of offshore wind capacity, 200 MW of onshore wind capacity.*

The GEC believes that this number has the most room to grow. New Jersey is home to over 126 miles of coast line. The offshore capability should be set much higher. The GEC suggests that this number be tripled to 3000 MW of Offshore capacity. Onshore capacity should also be increased substantially however wind corridor studies would be needed for utility scale onshore wind turbines. The GEC has suggested that the New Jersey Department of Corrections seek to utilize it's vast real estate across the state as alternative energy hybrid locations seeking wind , solar , CHP and biomass as pilot sites. These sites can also be used as "Green Job Corps" training facilities for inmates that can become a substantial new demographic in the "green" collar jobs that will be needed for New Jersey to meet the goals of the EMP.

#### **1,500 MW of solar capacity**

This action item is the most deficient.

The free power that shines on Earth from the sun is virtually limitless — the energy humans currently use in an entire year is less than the solar energy that strikes our planet *every hour*.

In a single second, the sun generates enough energy to supply all U.S. energy needs for 9,000,000 years.

The electrical infrastructure or "grid" that transmits and distributes electricity from power plants to homes undergoes a lot of stress. Much like a highway during rush hour, the transmission lines running from power plants become "congested." This congestion can increase the likelihood of power outages. Photo Voltaic or Solar as much of us know it, can help ease that congestion because it goes directly into the distribution infrastructure, ready to supply homes and businesses across New Jersey.

Besides its environmental benefits, solar energy bolsters the regional power grid by making the most energy when the need is greatest - those sunny summer afternoons when air conditioners are pressing the grid to the limit.

The difference between renewables is that they take days or weeks to apply instead of years it takes to build normal power plants.

New Jersey must do the following in order to secure a viable solar future:

Develop programs that encourage solar deployment on New Jersey farms.

The GEC has drafted the American Solar Field Act. This has been provided to various political leaders within the state but for the past year and ½ there has been no political will to support it. This legislation would set the course for solar deployment on New Jersey farms.

Develop programs that support solar in schools. The GEC suggests that this opportunity be given major attention. 635 School districts exist in the state of New Jersey and each and every one of them can be generating net metered power during the summer months that can help subsidize school board budgets. The state legislature should create the possibility of these projects to be funded through public private partnerships utilizing power purchasing agreements.

Develop programs that encourage municipalities to build solar projects.

The GEC has already been working with the New Jersey Environmental Infrastructure Trust that will begin funding Municipal Utility Authorities that wish to power their facilities with alternative energy. The state legislature should create the possibility of these projects to be funded through public private partnerships utilizing power purchasing agreements.

Nationwide, nearly one megawatt of new solar energy capacity is being installed per business day. This number will drastically increase in the short term due to newer technologies and more product affordability coupled with a Federal commitment toward a feed in tariff.

Venture-capital firms pumped \$264 million into solar companies in 2006, up from \$64 million in 2004. This investment will grow exponentially through 2035 as has been projected by the US Treasury Department.

***For all of these reasons the GEC suggests that 1500 MW of Solar Capacity in the NJ EMP be graciously raised to set the standard as high as possible with no cap. Let this be market driven.***

#### **GEC Comments on Goal # 4:**

#### **Develop new low carbon emitting, efficient power plants to help close the gap between the supply and demand of electricity.**

We must recognize that we cannot meet our 2020 needs for electricity solely by maximizing renewable energy and energy efficiency. It is projected that by 2020, under business as usual, New Jersey's homes and businesses will use 100,000 GWh of electricity annually.

This demand must be satisfied from existing in state power plants, through the development of new in state power plants, the development of power plants outside New Jersey, or from a combination of these options. Whichever option or combinations of options are used to meet this electricity demand, they must be consistent with the State's 2020 and 2050 greenhouse gas targets. Our current fleet of power plants cannot be expected to supply all of this electricity, especially when much of the fleet is aging, expected to retire, or likely to be exporting its power.

Meeting our current and future energy demands will depend on an increase in electric generation capacity available to New Jersey. Importing additional conventional coal-based electricity, or developing more high-emitting power plants within New Jersey, will undermine our efforts to fight global warming. Therefore, New Jersey needs more electric generation capacity that overall is less carbon-intensive. We will:

- Use the State's current authorities to influence the development of that infrastructure, and work with the Legislature to obtain additional authorities that may be needed.

The Federal Energy Policy and Security Act of 2008 suggests that 160,000 linear miles of transmission lines be replaced in America. This would help regain some of the 40% of daily electricity generation loss through 19<sup>th</sup> century installed transmission lines. The GEC suggests and would aid New Jersey in seeking federal appropriations toward this replacement.

It is estimated that 37% of the US population lives within 300 miles of Trenton, N.J. That means that it makes sense to begin transmission line replacement in America right in New Jersey.

- Foster development of 1500 MW of new cogeneration capacity in New Jersey by 2020.

The GEC would be interested in helping New Jersey meet this action plan item.

- Create new electricity generation to meet the State's generation demands that will delay or eliminate forecasted problems with the reliability of the electricity supply, serve the State's greenhouse gas targets, and provide electricity at a reasonable price.

The GEC would be interested in helping New Jersey meet this action plan item.

## **GEC Comments on Goal # 5:**

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

The Governor's Economic Growth Strategy committed to aggressively encouraging the expansion and creation of clean energy solutions, and declared the clean energy technology sector as a cornerstone of the Edison Innovation Fund. The State must continue this investment, and expand its efforts to help attract and grow the clean energy technology sector in New Jersey. Therefore, the State will work to implement the following action items:

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.

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 Energy Master Plan.

The new Energy Independence Act creates a program that spends \$125 million annually to train workers in the clean-energy sector. A Pathways Out of Poverty provision ensures training for the poor and marginalized. The GEC suggests that New Jersey seeks immediate appropriations from this fund to begin creating a New Jersey "Green Jobs Corps" and that New Jersey seek to base this "Green Jobs Corps" in Newark ,N.J.

New Jersey must create a greening of it's economy and a creation of a climate change and jobs strategy that works for all it's residents.

New investment in a sustainable energy infrastructure must be structured to create good jobs and ensure stable energy prices.

Most importantly New Jersey must have an expansion and increased usage of mass transit and passenger rail as essential to both the economy and the environment.

The greening of the New Jersey economy means that every job that contributes to a low carbon future is a green job.

New Jersey must create a "green tape" regulatory process for businesses that are willing to create new jobs in this new "green" economy.

In closing, the National Green Energy Council makes these final points and suggestions in order that the New Jersey Energy Master Plan become a viable action plan for New Jersey's energy and economic future:

In order to meet the ramping up of solar capacity over the next 12 years to meet the RPS and Master Plan goals, New Jersey needs to move beyond the constraints of the current limited budget for increasing solar capacity.

The solar industry is at a crossroads right now in New Jersey because the budget for rebates has been overrun with applications due to the massive popularity of the rebate program. It is critical that a REC-only program be securitized immediately so that the solar industry infrastructure that has developed over the last 7 years has projects to build and can continue to grow and add new jobs. This infrastructure is critical to meeting RPS goals and those embodied in the Energy Master Plan.

**New Jersey must do the following in order to secure a viable solar future:**

**Develop measures to instill investor confidence in the long-term commitment to the REC program.**

- New Jersey must securitize its SREC program
- New Jersey should consider a Feed in Tariff comparable to the Switzerland model
- New Jersey must immediately resurrect the rebate program and find a way for workforce families to be able to afford solar again.

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The GEC has already been working with the New Jersey Environmental Infrastructure Trust that will begin funding Municipal Utility Authorities that wish to power their facilities with alternative energy. The state legislature should create the possibility of these projects to be funded through public private partnerships utilizing power purchasing agreements.

New Jersey requires 7 Gigawatts of electricity generation capacity. Wind, Solar, and other clean energy technologies can be brought online very quickly and produce power without pollution.

The National Green Energy Council believes that this new "green" revolution will become for America what the industrial revolution was to our grandfathers. It will create a whole new "green" economic engine of prosperity for America.

The nation stands at the crossroads of opportunity for domestic investments in innovation, new technology and energy efficiency that will save jobs, create new jobs and new industries and revitalize American manufacturing.

We support the goals set forth in the governor's directive and we pledge our best efforts to help achieve them.

**Ralph Avallone**

**President & CEO  
National Green Energy Council**