The Business Council
For Sustainable Energy

An Energy Agenda for the 21st Century

December 18, 2006

To: Ms. Jeanne M. Fox, President, New Jersey Board of Public Utiltiies
Ms. Lisa P. Jackson, New Jersey Department of Environmental Protection
Mr. Chris Sherry, RGGI Staff Working Group and New Jersey Department of Environmental Protection

Regarding: Recommendations for the RGGI Public Benefit Set-Aside

The Business Council for Sustainable Energy (BCSE) has been working with RGGI leaders to recommend ways to effectively implement the Regional Greenhouse Gas Initiative's (RGGI) cap-and trade program and to direct its Public Benefit Set-Aside resources. On behalf of our members, we would like to provide suggestions for the implementation of the RGGI Public Benefit Allowance Set-Aside for New Jersey. Since each state entering into RGGI has the ability to determine how the set-aside revenue will be used, we urge New Jersey to expand upon, and create incentives for, renewable and energy efficiency projects beyond its existing programs.

Background
The Council was created in 1992 by companies in the energy efficiency, renewable energy, natural gas, electric utility and independent power industries. Our membership has a broad base and includes companies such as NiSource, PPM Energy, Sempra Energy, Brookfield Power, Enel North America, Inc., Sun Edison LLC and American Standard/Trane as well as industry trade associations representing the wind, solar, hydropower, energy efficiency, natural gas and insulation industries. The Council promotes public policies that reduce the environmental footprint of energy production and use, while encouraging economic growth and energy independence.

The Council has taken an active role in the RGGI process. We have met with many agency heads and Staff Working Group members over the past two years. Our members view RGGI as an important vehicle to reduce greenhouse gas emissions and create a workable national sustainable energy policy model.

We are aware that New Jersey already has a wide array of incentives to encourage renewable energy and energy efficiency including:

- New Jersey Board of Public Utilities (BPU) Combined Heat and Power Rebate Program
- BPU Renewable Portfolio Standard (RPS)
- BPU Societal Benefits Charge (SBC)
- New Jersey Commerce and Economic Growth Commission's Sustainable Development Loan Fund

While New Jersey's existing regulations and programs encourage renewable energy and energy efficiency, there are improvements that can be made. The RGGI Public Benefit Set-Aside can be used to achieve these objectives. Our recommendations focus on the incorporation of clean energy generation and energy efficiency into New Jersey's RGGI implementation plan. ***Only investments in clean generation and energy efficiency reduce both greenhouse gas emissions and consumer costs at the same time***.

Specifically, we urge New Jersey's draft RGGI rule to include:

1. Output-based allowance allocation policy, should allowances be distributed to generators under New Jersey's RGGI program
2. Expansion of the minimum 25 percent Public Benefit Set-Aside program
3. Designation of New Jersey's Public Benefit Set-Aside resources to energy efficiency and clean generation, such as renewable energy and combined heat and power

Output-Based Allocations

The Council believes that any allowances distributed under RGGI should be allocated by using an output-based methodology. An output-based approach benefits energy efficiency and clean generation – including renewable energy – since distribution is based on the amount of electricity generated not on the amount of fuel used or a facility's historic emissions. The Council recommends a fuel-neutral, updating output-based allocation that focuses on in-state generation. Updating, output-based allocation rewards greater efficiency and encourages investment in new generating technologies. Output-based policies send a clear signal to the marketplace – lower carbon emitting energy options receive direct, clear, consistent and bankable value.

In addition, output-based allowance allocation accommodates the carbon dioxide emission reduction claims associated with renewable energy generation, allowing Connecticut to encourage the voluntary markets for renewable energy.

Set-Aside Criteria Guidelines

The Council believes that the set-aside has the potential to be a tremendous driving force for renewable energy and energy efficiency. The RGGI Memorandum of Understanding (MOU) establishes the set-aside for several specific purposes:

- Promote energy efficiency.
- Directly mitigate electricity ratepayer impacts.
- Promote renewable or non-carbon-emitting technologies.
- Stimulate/reward investment in innovative carbon emissions abatement technologies.
- Fund administration of the program.

Even within the list above, there are many options. This is why criteria for the use of the set-aside are of great importance. The Council has compiled the following list of criteria to ensure that the set-aside provides the greatest benefit to New Jersey in meeting the direct goals of RGGI as well as complementary energy and environmental objectives.

The first goal of RGGI is to reduce carbon dioxide (CO_2) emissions associated with electricity consumption. The set-aside funds can support this through promotion of low or zero emitting generation outside the cap such as renewable energy and small combined heat and power (CHP). It can also support increased end use efficiency and CO_2 abatement technologies.

Minimizing consumer cost is another important goal. This can be achieved by direct payments to consumers; however, this may not be the best approach. Direct payments can artificially reduce the cost of energy and reduce the incentive to increase efficiency. A better alternative may be to promote the use of technologies that minimize the cost of low CO_2 electricity.

Reducing leakage and reducing regional energy consumption/load growth are two additional RGGI goals that can be achieved by use of the set-aside to promote clean energy resources.

Table 1 – Criteria for Implementing Public Benefit Set-Aside

Primary Set-Aside Criteria	Complementary Set-Aside Criteria
• Reduce CO_2 emissions associated with electricity consumption. - Low/no-emissions generation technologies outside the cap - End use efficiency - CO_2 abatement technologies • Reduce the cost of the RGGI program/cost of electricity to consumers. - Consumer rebates - Reducing cost of low-emission electricity • Reduce emission "leakage." • Reduce regional energy consumption.	• Provide non-RGGI environmental benefits. • Benefit the region's economy. - Increase local jobs and economic growth - Improve energy "balance of trade" • Promote private investment in clean energy resources. • Increase the application of new clean energy technologies.

In addition to the primary criteria, there are complementary criteria, which are not part of the RGGI program but should also be considered in implementing the set-aside. The first is the promotion of non-RGGI (non-GHG) environmental benefits. Clean energy resources can contribute to the achievement of conventional air quality goals as well as GHG goals. Clean resources can also provide local jobs and economic growth while reducing the amount of money that leaves the region to pay for fossil fuels from other states or countries.

These criteria should be the basis for identifying applications for the Public Benefit Set-Aside funds.

Recommendations for Set-Aside Implementation

Our members believe that funding from the set-aside would provide a significant means for encouraging energy efficiency and renewable energy in New Jersey. In fact, a study by the American Council for an Energy-Efficient Economy (ACEEE) found that a higher fraction of the Public Benefit Set-Aside than the standard 25 percent is necessary to achieve the most positive economic outcomes for RGGI states.[1] As you already know, New Jersey, in its announcement shortly after joining RGGI announced that it would "auction significantly more of the allowances than required under the agreement to maximize consumer benefits and better protect electricity customers.[2]" The Council applauds this increased set-aside and would like to emphasize that increasing the set-aside is an excellent way to achieve the RGGI targets cost-effectively by providing greater support for energy efficiency and clean generation. The Council suggests that the 25 percent should be considered a floor not the ceiling and that it be used to increase energy efficiency and clean power generation in New Jersey.

[1] Prindle, W.R., A.M. Shipley, and R. N. Elliott. 2006. "Energy Efficiency's Role in a Carbon Cap-and-Trade System: Modeling Results from the Regional Greenhouse Gas Initiative." Report Number E064. 20 July 2006.
[2] Fox, J.M., and B.M. Campbell. "N.J. Part of Initiative to Address Global Warming."

To achieve this, the Council urges New Jersey to state in its draft RGGI rule that set-aside resources will be used to support increased energy efficiency, renewable energy and small, clean generation (under 25 MW), including combined heat and power. These technologies will reduce carbon dioxide emissions at the minimum cost to consumers. In addition, the increased state and regional power capacity that can result from the combination of demand efficiency and new clean generation will prevent leakage and reduce pricing pressures caused by inefficient natural gas usage by the power sector.

Furthermore, to ensure that set-aside resources positively impact project development and financing, allowances under the set-aside should be granted as directly and simply as possible to clean energy generators and investors in energy efficiency, based on megawatt hours generated or reduced consumption.

The Council, in consultation with our members, has compiled specific recommendations for regulatory policies or funding efforts that could be supported by the set-aside resources. Our set-aside guidance focuses on the following areas:

1. Building Codes and Beyond Code Programs
2. Production Incentives for Renewable Energy and Energy Efficiency

In addition, we have several recommendations on complementary energy policies.

1. Building Codes and Beyond Code Programs

Updating building codes and standards to encourage energy efficiency and renewable installations can help to curb air emissions, decrease costs and improve public health. ACEEE estimates that upgrading residential codes alone could save an average state around $650 million in homeowner energy bills during a 30-year period.[3] Furthermore, a recent Harvard study that quantified the health benefits of energy efficiency programs found that insulation retrofits in single family homes could lead to 240 fewer deaths, 6,500 fewer asthma attacks and 110,000 fewer restricted activity days per year.[4]

The Council generally recommends that states adopt the 2006 International Energy Conservation Codes (IECC) for residential facilities and the 2007 American Society of Heating and Ventilating Engineers (ASHRAE) 90.1 for commercial buildings. New Jersey's current residential code is the 1995 Model Energy Code and the effective commercial code is the 1999 ASHRAE 90.1. New Jersey plans on updating its residential code to the 2006 IECC standard. In addition, updating the commercial code to the 2007 ASHRAE 90.1 standard when it becomes available would improve efficiency.

While adopting appropriate standards is important, states must also ensure that the standards are implemented and enforced. In practice, compliance with codes is uneven and investments in enforcement and training greatly enhance overall compliance. We recommend that Public Benefit Set-Aside funds be used towards training of code inspectors, builders, and also directed to financial incentives for businesses and residences to adopt these new standards. Although codes may require more efficient building techniques, appliances, and lighting, among other actions, these codes are only effective if they are understood and implemented.

Funding for training could go to the New Jersey Department of Community Affairs Division of Codes and Standards, or a non-profit such as the Building Codes Assistance Project or the Northeast Energy Efficiency Partnership to administer code training. In addition, financial incentives for businesses and residences will encourage owners to ensure that their new or renovated building meets or exceeds current efficiency standards.

---

[3] Prindle, W., N. Dietsch, R.N. Elliott, M. Kushler, T. Langer, and S. Nadel. 2003. "Energy Efficiency's Next Generation: Innovation at the State Level" Report Number E031. 12 July 2006. <http://www.aceee.org/pubs/e031full.pdf>.

[4] Levy, J. I. Nishioka, Y. and J. Spengler. April 11 2003. "The Public Health Benefits of Insulation Retrofits in Existing Housing in the United States." Environmental Health: A Global Access Science Source 2:4 (2003). 12 July 2006 <http://www.ehjournal.net/content/2/1/4>.

We also suggest that owners of larger buildings be required to assess the feasibility of self-generation such as CHP, especially in load-congested areas. The State of New Jersey Board of Public Utilities Clean Financing Programs and COOLAdvantage and WARMAdvantage Programs are great examples of current state programs for energy efficiency. Public Benefit Set-Aside revenues could be used to enhance these existing programs and to provide more funding for low-income housing improvements and loans or grants for small businesses. These funds should be in addition to existing programs.

2. Production Incentives for Renewable energy and Efficiency

Funds from the set-aside can and should be used to expand existing capital cost rebates, buy-downs and incentives for energy efficiency and renewable energy projects. However, another important vehicle to support clean energy projects in New Jersey is through a production incentive program funded with Public Benefit Set-Aside resources. Existing production incentives are most often direct payments or tax benefits available to new renewable facilities based on their generation. In this case, we suggest that payments could either be given through cash from auction proceeds or may come from direct allowance allocations from the set-aside to qualifying facilities based on their generation or energy efficiency benefits (reduced consumption). Such payments are a direct method of incentivizing production from clean energy and efficiency resources that is simpler than many other rate-related initiatives that have been used in the past.

New Jersey already has a production incentive for photovoltaics. This program administered by the New Jersey Board of Public Utilities (BPU) anticipates solar entities to receive around $200 per megawatt-hour of electricity generated. The maximum rate is $250 per megawatt-hour. The program functions by way of the Renewable Portfolio Standard (RPS) under which a separate tier was established to be fulfilled solely by solar generation. Although limited in scope, New Jersey's solar production incentive can be used as a basis for establishing new incentives with help from set-aside funds.

The Council acknowledges that set-aside resources may be limited. If faced with the decision between developing new programs versus enhancing existing and effective ones, the Council encourages New Jersey to focus on already established programs. Our members believe that getting projects in the ground is the most important factor and heavy administration costs that may be involved with establishing new programs should be avoided.

There is currently a federal tax credit for certain renewable energy production, however, it is scheduled to expire in 2008 before RGGI's implementation. The intermittent nature of federal incentives has been a significant limit on their effectiveness. While there can be challenging and sometimes time-consuming implementation process and payment decisions involved with this type of initiative, we recommend a long-term commitment to a simple and direct production incentive payment for a broad list of energy efficiency and renewable projects. This should include all non-emitting renewable energy, biomass, and CHP including technologies not currently covered by the federal program, such as small-scale wind as well as the addition of generating capabilities at existing projects, such as efficiency upgrades at hydropower facilities and end-use efficiency projects.

Complementary Energy Policies

The RGGI MOU states that each state "must maintain and, where feasible expand energy policies to decrease the use of less efficient or relatively higher polluting generation while maintaining economic growth." The Council recognizes that New Jersey has a number of well-established and beneficial complementary energy programs. These programs have addressed many barriers to energy efficiency and renewable energy such as interconnection, net metering, buyback rates and other concerns yet improvements could be made in New Jersey by using set-aside resources. The Council recommends that the following areas be enhanced with set-aside funds:

1. Energy Efficiency Standards
2. Combined Heat and Power (CHP) Incentives
3. Expansion of Renewable Energy Generation

1. Energy Efficiency Standards

New Jersey has a number of incentives for renewable resources but has far fewer incentives for energy efficiency. In fact, an ACEEE study found that "increased investment in energy efficiency results in the most positive set of economic impacts for the region.[5]" Furthermore, the report concluded that by doubling the current level of energy efficiency spending in the RGGI region lead to the following improvements:

- Cut load growth by around two-thirds, from about 20% to about 6% above 2006 levels
- Reduce capacity additions through 2024 by 25% below the reference case forecasts
- Keep carbon emissions virtually flat through 2024 (compared to 15% growth)
- Reduce energy price growth to around 0% until 2020, when they would have less than a 1% impact on market prices
- Reduce household electricity bills by an average of $109 lower in 2021 than under the reference case
- Increase economic growth from almost no effect to 0.6% positive growth relative to the reference case

New Jersey has created a number of helpful regulations and programs in recent years that could be strengthened with set-aside funds. New Jersey did place more stringent efficiency standards on eight appliances in 2005. New Jersey projects that these efficiency standards will save consumers over $742 million by 2020 on their utility bills.[6] With more revenue to use for regulatory actions, New Jersey could improve efficiency standards and work on creating a state-wide energy efficiency target.

New Jersey may also want to consider "decoupling" legislation. When utilities make their profit from the amount of energy they sell (electricity or gas), it is difficult for these utilities to support energy-efficiency programs that may impact their profits. By understanding this conflict and working with utilities to develop policies and measures that respond to shareholders while separating the sale of BTUs from profits, New Jersey and its utilities will be able to advance energy-efficiency programs together.

2. CHP Incentives

New Jersey's Combined Heat and Power (CHP) Rebate Program, is an excellent means to promote energy efficiency in the state. This program provides a rebate in dollars per watt for CHP systems with an efficiency of at least 60% and up to 1 MW in size. With set-aside funding this program could provide greater rebates for CHP technologies. The New Jersey BPU also administers the Clean Energy Program: Renewable Project Grants, an initiative designed to provide grants to CHP installations that use biomass, biogas, or LFG as a primary fuel. The grant program would be more beneficial if all types of CHP regardless of fuel use were eligible. Expansion of eligibility to all types of CHP could be easily accomplished with additional backing from the set-aside.

New Jersey can use other innovative state programs as a way to improve their own energy efficiency policies and programs. For example, Connecticut has recently established a number of incentives for energy efficient technologies such as CHP units. Connecticut has long term loans, grants, and property tax rebates for CHP. In their "Act Concerning Energy Independence," CHP systems that use natural gas are eligible for a rebate in an amount equivalent to the customer's retail delivery charge. Also, customer-owned development of DG projects is highly encouraged. In fact, electric companies can receive rewards for generation proposals submitted by other entities to the Public Utility Commission. Connecticut also exempts new customer-side DG units from paying back-up rates if the system is available during peak periods.

[5] Prindle, W.R., A.M. Shipley, and R. N. Elliott. 2006. "Energy Efficiency's Role in a Carbon Cap-and-Trade System: Modeling Results from the Regional Greenhouse Gas Initiative." Report Number E064. 20 July 2006.

[6] Pew Center: Global Climate Change. 2005 Archives. "Three States Issue New Appliance Energy Standards." 24 July 2006. < http://www.pewclimate.org/what_s_being_done/in_the_states/2005_archives.cfm>.

Additionally, the Council believes a technology verification program aimed at private investors should be created. A verification program administered by the New Jersey BPU in combination could provide a "technology guarantee" that would mitigate the technology risk that can deter private financing of CHP projects and, thus, increase the number of projects BPU's CHP programs can support.

To conclude, the Council recommends directing funding toward the incremental investment in systems that maximize energy efficiency. This might include financial support for the addition of heat recovery components or other equipment that enable a system to achieve the highest efficiency rates.

3. Expanding Renewable Energy in New Jersey

To increase renewable energy projects in New Jersey, allowance value should be granted to renewable energy generators in a direct and consistent manner. Further, to maximize effectiveness, set-aside funds should support and expand existing programs that have a proven track record in supporting renewable energy projects. Such programs include the state's RPS and green power purchasing program.

Set-aside funds should be targeted to provide stability for incentives for renewable energy generation, such as the federal renewable energy Production Tax Credit (PTC) discussed earlier. The PTC receives short-term renewals that result in uncertain project financing. Using set-aside funds to smooth out the cyclical renewable energy development process would send a clear and dramatic positive signal to investors and result in more projects in the ground in New Jersey.

Additionally, with set-aside revenue New Jersey could also expand upon several more state programs that would benefit both renewable energy and efficiency projects. Net-metering and interconnection should be extended to all types of CHP technologies, not just fuel cells operating on renewable fuels. The Societal Benefits Charge (SBC), the main source of state funding for renewable energy and energy efficiency, which provides $125 million per year in funding could better provide for existing programs with resources from the set-aside. Also, New Jersey has only tax exemptions for solar and wind systems, tax credits should extend to a wide range of renewable and energy efficiency resources.

New Jersey has one of the highest RPS targets in the country. By 2021, 22.5% of electricity sold in the state must come from qualifying renewable energy. New Jersey just strengthened their standards in April of this year boosting percentage requirements from "Class I" and "Class II" renewable energy and creating a separate percentage requirement of 2.12% to come from solar. Qualifying "Class I" renewable energy is electricity generated by solar, wind, wave or tidal action, geothermal energy, landfill gas, anaerobic digestion, fuel cells using renewable fuels, and with special permission some other forms of sustainable biomass. "Class II" renewable energy is generated from hydropower facilities less than 30 megawatts and resource-recovery facilities located instate and approved by the DEP.

Despite New Jersey's stringent RPS the state has no enforceable Energy Efficiency Standards. The New Jersey Board of Public Utilities (BPU) did set energy efficiency goals. BPU set a goal of 1,813,750 MWh for electricity savings and 2,596,706 for natural gas savings for the years 2005-2008.[7] A better approach would be to add an enforceable standard known as an Energy Portfolio Standard (EPS) or an Energy Efficiency Resource Standard (EERS) as a separate tier to the established RPS. According to a recent ACEEE report, as of March 2006 New Jersey was planning on beginning work on this standard soon.[8] This would have the effect of encouraging energy efficiency development without diluting incentives for new renewable generation. Additionally, the suggested EPS requirements should be established for an extended time period, for at least the same time frame as the RPS, until 2021, with periodic reviews and option for changes. This would

[7] EPA. 14 April 2005 "State EE/RE Technical Forum. Call #7: Energy Efficiency Resource Standards." 24 July 2006 <http://www.epa.gov/cleanrgy/pdf/keystone/Background_EERS_4-14-05_Final.pdf>.

[8] Prindle, W.R., A.M. Shipley, and R. N. Elliott. 2006. "Energy Efficiency's Role in a Carbon Cap-and-Trade System: Modeling Results from the Regional Greenhouse Gas Initiative." Report Number E064. 20 July 2006.

provide assurance to energy efficiency or renewable providers so that their long term investments would be worthwhile.

In summary, we commend New Jersey on its existing RPS and recommend the following improvements:

- Increase the total clean energy portfolio standard requirements for renewable energy.
- Establish separate tiers for renewable and energy efficiency resources. The goal of the program should be to encourage both types of resources and not allow one to dominate. Both are important and both have role in meeting GHG and energy goals.
- Allow a broad coverage of renewable, end-use efficiency and supply side efficiency projects not covered by the RGGI cap (such as small distributed generation and CHP).

Summary
Expanded energy efficiency and renewable resources will be critical to the success of the RGGI program. The Public Benefit Set-Aside can be instrumental in achieving RGGI's goal of reduced greenhouse gas emissions if it is used effectively, as recommended above. Expansion of New Jersey's existing complementary energy policies will also be instrumental to these goals.

To conclude, the Council would also like to re-affirm the importance of New Jersey's two vehicles within RGGI to influence energy-related investments in the state – the allocation policy and size and use of its Public Benefit Set-Aside. To increase clean energy project development in the state, we urge New Jersey to include a greater than 25 percent set-aside in its draft RGGI rule, and specifically state in the rule that it be use to support energy efficiency and clean generation projects, such as renewable energy and CHP. Should allowances also be distributed to generators under New Jersey's RGGI rule, we urge it be given to generators based on their efficiency rather than heat input or historic emissions. This can most effectively be achieved through an output-based allocation policy.

Thank you for the opportunity to provide input on the design of New Jersey's Public Benefit Set Aside under RGGI. If you have any questions or comments please feel free to contact me at the Council's offices (202-785-0507) or via email at ljacobson@bcse.org.

Sincerely,

Lisa Jacobson
Executive Director