DEPARTMENT OF ENVIRONMENTAL PROTECTION

POLICY, PLANNING AND SCIENCE

Global Warming Solutions Fund Rules

Adopted Rule: N.J.A.C. 7:27D

Proposed February 17, 2009 at 41 N.J.R. 833(a)

Adopted: _____ by Mark N. Mauriello, Acting Commissioner, Department of Environmental Protection

Filed: _____as _____ **with substantive changes** not requiring additional public notice and comments (see N.J.A.C. 1:30-4.3).

Authority: N.J.S.A. 26:2C-37 et seq. and 26:2C-50 et seq.

DEP Docket Number: 01-09-01/696

Effective Date:

Expiration Date:

The New Jersey Department of Environmental Protection (Department) is adopting new N.J.A.C. 7:27D, Global Warming Solutions Fund rules. N.J.A.C. 7:27D implements section 8 of the Global Warming Solutions Fund Act, N.J.S.A. 26:2C-50 et seq. (Act), which requires the Department to adopt guidelines and a priority ranking system to be used to assist in allocating certain funds to eligible projects or programs as set forth in the Act. The adopted rules establish a priority ranking system for the New Jersey Economic Development Authority (EDA), the New Jersey Board of Public Utilities (BPU), and the Department to use when allocating funds from the Global Warming Solutions Fund (Fund). The rules also set forth the criteria the Department will use to determine whether a new electric generating facility is state of the art for the purposes

of the Act and establish the policies and the procedure by which the Department will allocate funds from the Global Warming Solutions Fund through the Department's Local Government Greenhouse Gas Reduction Program.

Summary of Hearing Officer Recommendation and Agency Response:

A public hearing was held on March 23, 2009 at the Department of Environmental Protection in Trenton, New Jersey, at which Marjorie Kaplan, Manager of the Office of Climate and Energy, served as the hearing officer. Four people provided oral comments at the hearing. The Department received 11 written comments during the public comment period. After reviewing the comments presented at the hearing and the written comments received, the hearing officer recommended that the proposed new rules be adopted with the changes described below in the Summary of Public Comments and Agency Responses. The Department accepts the hearing officer's recommendation.

The record of the public hearing is available for inspection in accordance with applicable law by contacting:

New Jersey Department of Environmental Protection

Office of Legal Affairs

Attn: DEP Docket No. 01-09-01/696

401 East State Street

PO Box 402

Trenton, New Jersey 08625-0402

Summary of Public Comments and Agency Responses:

The Department received oral and/or written comments on the proposed amendments from the following persons:

1. Martin Bierbaum, Municipal Land Use Center
2. Sara Bluhm, New Jersey Business & Industry Association
3. Dianne Brake, PlanSmart New Jersey
4. Pierre Bull, Natural Resources Defense Council
5. Steven Goldenberg, Fox Rothschild, representing the New Jersey Large Energy Users Coalition
6. Amy Hansen, New Jersey Conservation Foundation
7. Josh Heltzer, First Environment
8. Tom Hoatson, LS Power Development, Inc.
9. Peter Kasabach, New Jersey Future
10. Adam Kaufman, Independent Energy Producers of New Jersey
11. Carlos Rodrigues, Regional Plan Association
12. Mark Scorsolini, PSE&G
13. Nicky Sheats, Center for the Urban Environment, representing the New Jersey Environmental Justice Alliance
14. Kate Slevin, Tri-State Transportation Campaign

The timely submitted comments and the Department's responses are summarized below. The number(s) in parentheses after each comment identifies the respective commenter(s) listed above.

N.J.A.C. 7:27D-1 General Provisions

1. COMMENT: Projects consistent with the State Development and Redevelopment Plan should be assigned a point value based on the priority ranking system, e.g., by including consistency with the policy objectives of the State Development and Redevelopment Plan in the definition of "co-benefits." (1, 3, 9, 11, 14)

RESPONSE: The definition of co-benefits at N.J.A.C. 7:27D-1.2 is designed to implement N.J.S.A 26:2C-52b(4) by providing for the consideration of benefits that a project may provide in addition to greenhouse gas reduction. Co-benefits as defined are not limited to the items enumerated in the rules, but the rules permit the agencies involved to identify other co-benefits as appropriate based on the nature of the project.

N.J.A.C. 7:27D-2.2(a) states, The assignment of priority points shall reflect the degree to which a propose project furthers the goals of the New Jersey Energy Master Plan, the Global Warming Response Act, the Act and, as applicable, the policy objectives of the State Development and Redevelopment Plan." Therefore, consistency with the State Plan is among the factors that can be considered in assigning points for co-benefits under N.J.A.C. 7:27D-2.2(b)2iii. However, it is not appropriate to assign a fixed point value to such factors, given the varying nature of projects and the co-benefits they may generate. For example, a project such as a high-efficiency electric generation facility may provide significant greenhouse gas reductions while having only peripheral impacts on the concerns addressed by the State Plan. Conversely, aspects of a project that promote the policies and objectives of the State Plan favoring mixed use, pedestrian and transit-friendly land use patterns, and so forth may more appropriately be viewed

as direct benefits consistent with the purpose of the Fund to reduce greenhouse gas emissions, rather than as co-benefits.

2. COMMENT: The proposed rules should be amended to better reflect the nature of planning with respect to greenhouse gas emissions. The definition of "measurable reduction" should be expanded to include land-use planning for development patterns that would produce lower per capita emissions than prevailing development patterns. (1, 3, 9, 11, 14)

RESPONSE: The adopted definition of "measurable reduction" at N.J.A.C. 7:27D-1.2 establishes a standard that can be applied to various types of projects, including but not limited to projects involving land use planning. Land use projects can be assessed in terms of their impacts on vehicle miles traveled and/or energy demand, each of which directly affects greenhouse gas emissions and is readily translatable into a measurable effect on such emissions.

N.J.A.C. 7:27D-2 Program Area Determination, Priority Ranking, Award, and Reporting System

3. COMMENT: Additional assurances are needed for careful coordination among BPU and EDA regarding grant solicitations and project evaluation and implementation. (4)

RESPONSE: The BPU, EDA and the Department closely coordinated the development of the priority ranking system for projects and programs contained in the rules. The Department, BPU,

and EDA have also formed an inter-agency work group to assist the three agencies in implementing the adopted rules. The agencies are committed to maintaining an ongoing effort to coordinate their solutions to grant–related issues.

4. COMMENT: Stakeholders should be given the opportunity to comment on the overall grant development approach and specific grant solicitations developed by BPU and EDA. Additionally, the Department should bring in at least two outside technology and/or energy resource specialists with no conflicts of interest with respect to the proposed projects being evaluated to serve as technical evaluation specialists to assist the agencies in providing a fair and balanced approach in choosing to fund projects based on technical merits and cost-effectiveness. (4)

RESPONSE: The EDA affords stakeholders opportunity to comment on the development of grant and loan products to implement provisions of the Act. In addition to briefings and status reports delivered at regular EDA Board meetings, which are open to the public, the EDA has utilized a stakeholder approach to assist in and provide input for the initial phase of development for EDA financing programs using the Fund. As the EDA continues to develop and refine its Fund-related grant and loan products, stakeholder input will be further solicited, largely through focus groups. Finally, the Department and BPU will continue to provide technical assistance to the EDA.

The BPU similarly affords stakeholders opportunity to comment on grant development and solicitation. On April 3, 2009, the BPU issued a public notice seeking comments regarding the use of its allocation of funds from the CO_2 Budget Trading Program auctions (RGGI

auctions) to be held during calendar year 2009. The BPU posted this public notice on its website and also distributed it to the BPU Universal Service Fund Working Group, the BPU Energy Assistance Program Review Committee, and others from community organizations and entities representing the interests of the public (see Order Approving Use of Future GWSF Monies, Docket Nos. EO09010040 and EO09050350, available from the BPU at http://nj.gov/bpu/agenda/orders/). Through the public notice, BPU sought comments on the following:

1. Whether the BPU should allocate its share of the Fund towards programs to reduce electricity demand or programs to reduce the cost of electricity for low and moderate-income residential customers; and

2. Additional comments on the manner in which the BPU's share of the Fund is allocated.

In response to its public notice, the BPU received written comments from 19 individuals and organizations. The commenters were almost unanimous in recommending that the BPU use its share of funds deposited into the Fund from the four RGGI auctions scheduled for calendar year 2009 to provide direct financial assistance to low- and moderate-income households in paying their energy bills. Many of the commenters noted that low-income households are in especially dire need due to the current economic crisis, which is making it even more difficult for them to pay their utility bills.

The BPU reviewed the comments carefully and decided to allocate its share of the Fund monies from the four RGGI auctions to be held in calendar year 2009 toward programs to reduce the electricity costs to limited income households.

The Department is not required under the Act to review individual applications for EDA or BPU grants or loans from the Fund. Rather, each agency reviews applications submitted to that agency. In adopting the Act, the Legislature allocated Global Warming Solutions Fund monies in accordance with what it believed to be each agency's missions and expertise. Each agency will rely substantially on in-house expertise, but may retain independent, disinterested outside experts as needed. All special State officers (such as BPU commissioners and EDA Board members), as defined in the State's Conflict of Interest Law, N.J.S.A. 52:13D-13, and State employees are subject to the New Jersey Conflicts of Interest Law (N.J.S.A. 52:13D-12 et seq.) and to the Uniform Ethics Code (N.J.A.C. 19:61-6) promulgated by the State Ethics Commission, both of which provide protection against conflicts of interest.

5. COMMENT: There should be an established review process so that business knows how to request that new technologies be reviewed and what time parameters are associated with EDA's funding decisions for such technologies. (2)

RESPONSE: The purpose of the rules is to provide a framework for the evaluation and consideration of programs and of projects within competing program areas; thus, the rules do not provide a specific mandatory schedule for consideration of grant solicitations for a specific program area.

Although the desire to develop new technologies may be a consideration in the identification of program areas or projects to be funded, there are many factors that are considered in the selection of a program area or project. To the extent that an applicant would

like the EDA to consider new technologies as part of its funding decision, the applicant may present those technologies as part of the funding application.

Other funding sources may be available for new technologies. The EDA partners with the New Jersey Commission on Science and Technology (CST) in implementing the Edison Innovation Clean Energy Fund. Utilizing funding from the BPU, the Clean Energy Fund provides financing in the amount of $100,000 to $500,000 to New Jersey technology companies, for demonstration projects and developmental and ancillary activities necessary to commercialize identified renewable energy technologies and innovative technologies that significantly increase energy efficiency. This partnership may provide funding for technologies that can demonstrate their integral relationship to the development of Class 1 renewable energy technologies that produce or support the production of renewable or clean electricity. The Clean Energy Fund distributes financing on a competitive basis. The CST and EDA provide public notice of the availability of financing, which notice outlines the review process. In addition, the EDA plans to utilize State Energy Program and American Recovery and Reinvestment Act funds to further projects that use commercially available technology in an innovative manner.

6. COMMENT: The rules should specify how and when EDA will notify interested parties that they may apply for funding. The rules should also define application requirements and submission deadline(s) to apply for and obtain funding from EDA. Timeframes should be established for application review, eligibility determination, and disbursement of funding. (12)

RESPONSE: The EDA approves the establishment of program areas and program modifications at the regularly scheduled EDA board meetings, which are open to the public. In addition, all

information pertaining to funding requirements, timeframes for submission and review of applications are posted on its website at www.njeda.com. Whenever possible, the EDA attempts to administer its financial assistance on a rolling application basis so that a business may apply for financing assistance on a timely basis, as needed. The review process can vary based on factors such as credit analysis and participation of lenders.

7. COMMENT: The rule proposal does not mention how long projects will stay in the queue for review, or if they will be funded after a certain amount of time. It is good to have a priority ranking; however, potential projects should not remain in the queue for an indefinite amount of time. This may be covered in the EDA-specific guidelines, but the review of a project should take 90 days or less for review and decision making to occur so that projects are not left in limbo. (2)

RESPONSE: The EDA undertakes a technical review within 90 days of receipt of a completed application and contacts the applicant promptly thereafter, either to inform the applicant that it is not eligible or to invite the applicant to submit financial information, which will be subject to an underwriting analysis. There are many factorsin the underwriting analysis that are not within the control of EDA, such as correspondence with the applicant and the applicant's creditors. Although EDA intends to complete the underwriting in a timely manner, it cannot establish a schedule for this part of the application evaluation because third parties are involved.

8. COMMENT: The Department is to be commended for establishing “one-stop” shopping for commercial and industrial ratepayers that apply for money under the Fund. While flexibility is

needed for emerging technologies, it is also needed for the permitting process. The establishment of a general permit for cogeneration or combined heat and power units that are under 20 megawatts (MW) would greatly help encourage the business community to install this form of distributed generation. Combining permits with money available from the EDA would further improve the deployment of cogeneration in the State. (2)

RESPONSE: The rules provide a priority ranking system for the selection of program areas and projects to be funded. The rules do not address permitting procedures, which are separately addressed by the Department's air quality permitting program. The Department's Division of Air Quality is in the process of developing general permits (GP-21 and GP-22) and general operating permits (GOP-005 and GOP-006) for combined heat and power (CHP) facilities powered by combustion turbines or spark ignited reciprocating engines. This would enable CHP units up to about 5 MW to obtain Departmental approval quickly, without a case by case review. Larger units are not appropriate for the specific general permits and general operating permits because of their higher emissions and the potential to trigger other permitting requirements, such as Federal Prevention of Significant Deterioration (PSD) or State non-attainment New Source Review (NSR) rules.

The general permit and general operating permit are being developed based on limiting emissions so that there are no significant air quality impacts that would need to be evaluated case by case. The general permit and general operating permit will provide an opportunity for many companies to quickly obtain permits for small- to moderate-size CHP facilities. Applications to build larger facilities require permit applications. To expedite review of larger CHP applications, there is a state of the art (SOTA) manual for larger turbines, including CHP

applications, which provides a presumptive norm for all the major control technology requirements. See State of the Art (SOTA) Manual for Stationary Combustion Turbines, available at www.nj.gov/dep/aqpp/sota.html.

9. COMMENT: The highest estimates are that cogeneration (or CHP) will cost $7,500 per kilowatt. The current credit of $450.00 is not enough. Cogeneration should receive a greater emphasis if the Department really wants to see it implemented. (5)

RESPONSE: The $450.00 per kilowatt performance incentive that the commenter cites is included in a law (P.L. 2009 c. 34, concerning the use of revenue from the retail margin assessed on certain classes of basic generation service customers), which Governor Corzine signed on March 31, 2009. The law appropriates at least $60 million for this and other financial incentives for CHP. The performance incentive is separate from the funding available under the Act, and is, therefore, outside the scope of this rulemaking.

It is true that the $450.00 per kilowatt incentive will not completely defray the cost of building a CHP plant. However, CHP also provides inherent incentives, especially through the efficient generation of electricity and thermal energy. That efficiency can save businesses money, which will help the CHP plant pay for itself over time. The $450.00 per kilowatt incentive, which is paid based on the plant's energy production, can shorten that payback period significantly and make the development of a CHP plant even more financially attractive.

In addition to this statutory incentive, cogeneration projects would also benefit from a number of provisions under the adopted rules. The rules recognize the importance of cogeneration in achieving the goals of the State's Energy Master Plan and in reducing

greenhouse gas emissions. N.J.A.C. 7:27D-2.1(b)3 provides that CHP projects can be funded by the EDA, and the rules do not require that a CHP project demonstrate a measurable reduction in energy use in order to receive points under N.J.A.C. 7:27D-2.2(b)2i; therefore, a cogeneration facility could be eligible for financial assistance from the Fund, in addition to the $450.00 per kilowatt performance incentive.

The monies potentially available through the Fund to support CHP and the $450.00 per kilowatt performance incentive represent only part of the incentives that the State has made available to promote the development of CHP and achieve the related goals of the Energy Master Plan. The "Clean Energy Solutions" program, a unified effort of the EDA, the BPU and the Department, provides further support for the deployment of CHP projects. The Clean Energy Solutions Capital Investment (CESCI) loan/grant program supports commercial, institutional or industrial entities proposing to construct CHP production facilities, as well as energy-efficient end-use projects and the construction of state of the art, efficient electric generation facilities. CESCI provides zero-interest loans and grants up to $5 million with up to a 10-year loan term to fund the purchase of fixed assets, including real estate and equipment. CESCI loans and grants are capitalized through the Global Warming Solutions Fund.

10. COMMENT: The commenter supports N.J.A.C. 7:27D-2.1(f), which allows BPU to provide direct financial assistance to electricity customers in low and moderate-income neighborhoods that are suffering hardships due to the State's efforts to combat global warming. (13)

RESPONSE: The Department acknowledges the commenter's support for the rules.

11. COMMENT: In terms of defraying costs for low-income customers, it is also important to look broadly at cushioning costs. The State should spend all Federal funding, as well as available State money. (7)

RESPONSE: The use of Federal funding is beyond the scope of the rules, which address only the use of the State's Fund. The Act allocates 20 percent of those funds to the BPU to be used to reduce electricity demand or costs to electricity customers in the low-income and moderate-income residential sector with a focus on urban areas. The rules establish a priority-ranking system to assist in the distribution of those funds. The BPU has thus far directed its share of the Fund to a program that provides emergency assistance toward payment of electric bills for customers in the low- and moderate-income residential sectors, to prevent disconnection of service to those facing crisis situations.

Although the use of Federal funding is beyond the scope of this rulemaking, the Department notes that New Jersey's State Energy Program (SEP) has been awarded $73.6 million in Federal funds under the American Recovery and Reinvestment Act (ARRA) to support clean energy efforts in the State. One of the primary goals of the SEP is to increase energy efficiency in order to reduce energy costs and consumption for consumers, businesses and government, as recommended by the commenter. The ARRA funding will be used to make grants to enable State government entities to invest in renewable energy and energy efficiency projects; to make energy efficiency programs available to customers that currently are ineligible to participate in the New Jersey Clean Energy Program; to provide financial assistance to businesses in New Jersey that are pursuing innovation in energy efficiency, renewable energy or alternative energy; to fund a program, administered by the New Jersey Housing and Mortgage

Finance Agency (HMFA), to make low-interest loans to single-family and multifamily property owners to make energy efficiency upgrades to their buildings and to fund HMFA grants for the construction of solar energy projects on income-qualified multifamily buildings across the State; and to fund efforts by the New Jersey Office of Energy Savings to reduce State government's energy consumption and lower its energy costs. In addition to the SEP efforts, ARRA will also fund Energy Efficiency and Conservation Block Grants (EECBG), to help the State and local governments reduce total energy use, cut fossil fuel emissions, and improve energy efficiency in their vehicle fleets and facilities. The EECBG program designates 65 municipalities and 10 counties to receive $61 million of the $75.46 million total in direct funding from the U.S. Department of Energy. The State is eligible for $14.4 million, of which $10.2 million will fund grants to the 501 municipalities and 11 counties not eligible for direct funding. Additional information is available at http://www.nj.gov/recovery/infrastructure.

12. COMMENT: As the agencies assess priorities, they have to keep in mind the interests of the dwindling industrial base and the larger business community. The business community is facing enormous challenges right now and could be assisted by providing more money for comprehensive energy audits. (5)

RESPONSE: The Department acknowledges the commenter's concern, which the Legislature considered when it passed the Act. The Act allocates 60 percent of the Fund to the EDA to provide grants and other forms of financial assistance to commercial, institutional, and industrial entities. End-use energy efficiency projects, including CHP projects, are eligible for assistance from the Fund.

The Department agrees that comprehensive audits to identify all cost-effective energy savings opportunities at a facility provide a basis for investments to improve energy efficiency for New Jersey businesses. The agencies may weigh these benefits along with other important concerns and priorities using the priority ranking system provided by these rules to select program areas and projects for funding.

Assistance for comprehensive audits is not limited to the Global Warming Solutions Fund. For example, the New Jersey Clean Energy Program's "Pay for Performance" program provides funding for existing commercial, industrial and institutional buildings with an average annual peak demand over 200 kilowatts (kW), which can be applied toward the cost of developing an Energy Reduction Plan capable of reducing the existing energy consumption of such facilities by 15 percent or more. For commercial and industrial facilities with peak demand of less than 200 kW, the Clean Energy Program's "Direct Install" program will help identify cost-effective energy efficiency retrofit opportunities and provide direct installation and financial incentives for up to 80 percent of installed cost to encourage the early replacement of existing equipment with high efficiency alternatives. Direct Install also provides for a free "walk-through" audit for commercial and industrial facilities less than 200 kW. Another program under development will use a sector-based approach to delivering energy efficiency, to overcome technical barriers to participation and make it easier for customers to access specific programs, services, products and technologies, training, and educational materials that are relevant to their businesses. The New Jersey Clean Energy Program also makes incentives available to support the installation of energy savings measures and post-construction verification of energy savings. Additional information is available at www.njcleanenergy.com/commercial-industrial/programs/programs.

13. COMMENT: The commenter supports the allocation at N.J.A.C. 7:27D-2.1(d) of 10 percent of the revenue towards programs that enhance the stewardship and restoration of the State's forests and tidal marshes for carbon sequestration. (6)

RESPONSE: The Department acknowledges the commenter's support for the rules.

14. COMMENT: The phrase "measurable reduction in greenhouse gas emissions relative to cost" at N.J.A.C. 7:27D-2.2(b)ii is too vague and is insufficient to allow for direct comparison of the cost-benefit merits across projects. The metric that should be used is cost per greenhouse gas ton reduced over the life of the project discounted by at least four percent per year. (4)

RESPONSE: Cost-effectiveness is a key factor in the evaluation of proposed projects, and cost per greenhouse gas ton reduced over the life of the project may be one of the measures used to gauge cost-effectiveness. However, the Department disagrees that discounting is required.

The rules do not require the funding agencies to use total cost over the life of the project, because doing so would require projections of operating and maintenance and other costs far into the future. Such projections could be subject to uncertainty or impose an unnecessary burden on applicants for funding. Up-front costs are by definition incurred in the present and, therefore, do not need to be discounted to the present.

If the commenter intends that future greenhouse gas reductions should be discounted, the Department also disagrees. At the commenter's suggested discount rate of four percent, a one-ton reduction occurring 18 years from now would have a present value of less than half a ton,

which would penalize projects with longer useful lives by discounting their emissions reductions. Since such reductions would contribute equally to the decrease in global greenhouse gas concentrations that the Act is designed to foster, such penalties are unwarranted. If discounting were to be used, which the Department disagrees is appropriate, the comment provides no basis for choosing a discount rate of four percent.

15. COMMENT: The rules should prioritize projects that, in addition to reducing emissions of carbon dioxide, will reduce emissions of fine particles and their precursors and provide jobs and other economic benefits to local residents in urban areas. N.J.A.C. 7:27D-2.2(b) should allow up to 40 points for projects that result in co-benefits in urban areas. (13)

RESPONSE: The primary purpose of the Fund is to reduce greenhouse gas emissions, as provided in the Act. N.J.A.C. 7:27D-2.2(b) allows a maximum of 50 points to be earned under paragraph (b)1, 30 points under paragraph (b)2, and 20 points under paragraph (b)3, for a total of 100 points. Allocating 40 of the 100 points as the commenter suggests would leave just 60 points for scoring other factors that are responsive to the primary purpose of the Act to reduce greenhouse gases in a cost-effective manner, such as reductions in energy use, ratepayer benefits, other environmental and societal co-benefits, and factors relating to project feasibility. Such an emphasis on co-benefits is not warranted under the Act. The availability of up to 30 points for co-benefits and other benefits under proposed N.J.A.C. 7:27D-2.2(b)2 is sufficient to address co-benefits in urban areas.

16. COMMENT: The best way for New Jersey to reach its ambitious clean energy target is to first invest in all cost-effective energy efficiency and then supplement additional needs for electricity capacity and generation through clean renewable energy sources. (4)

RESPONSE: The rules allow the agencies to give substantial weight to the need to invest in cost-effective energy efficiency. The goal is included or implied as an eligibility criterion under N.J.A.C. 7:27D-2.1(b) (end-use energy efficiency), N.J.A.C. 7:27D-2.1(e) (reduction in energy use), and N.J.A.C. 7:27D-2.2(b)2 (measurable reduction in energy use), among others. At the same time, the Act allows funding decisions to give priority to renewable or "clean" energy projects if warranted based on criteria specified in the Act. The Department agrees that New Jersey needs to invest in both energy efficiency and in renewable energy to reduce its greenhouse gas emissions.

The Act does not give priority to energy efficiency projects over renewable energy projects. Both will contribute to achieving substantial reductions in greenhouse gas emissions. The rules provide the agencies with discretion to adjust the weight given to each factor identified by the rules to reflect the State's needs as necessary.

17. COMMENT: The Department and other agencies should make information available more often than the required two years. This can help facilitate the review of existing technologies, as well as any cost-benefit analysis, in addition to the environmental indicators that are captured. (2)

RESPONSE: The Act, which forms the basis for the adopted rules, establishes a two-year reporting period. (See N.J.S.A. 26:2C-43.) N.J.A.C. 7:27D-2.5 takes into account not only the requirements of the Act, but also the agencies' available staff resources.

7:27D-3 State of the Art Electric Generating Facility

18. COMMENT: Although it is appropriate to encourage the extensive use of renewable energy in urban areas, the siting of even highly efficient combined heat and power electric generating plants in already overburdened communities is problematic. The Department should develop rules that will not provide funding to even highly efficient electric generating plants if they are sited in neighborhoods that are already suffering from significant amounts of pollution, and if they increase pollution loads in these communities. (13)

RESPONSE: Reducing environmental burdens on the types of areas to which the commenter refers is a major concern to the Department. Existing electric generating plants may be of an older type that uses fuel oil, the transport and combustion of which are major sources of emissions of fine particles smaller than 2.5 microns ($PM_{2.5}$) and volatile organic compounds (VOCs) (an ozone precursor); newer plants are likely to be gas-fired and would, therefore, reduce these emissions. By displacing existing pollution sources, newer, more efficient electric generating facilities will reduce the environmental burden on the urban areas about which the commenter is concerned. For information on the Department's environmental justice initiatives, see www.nj.gov/dep/ej/.

19. COMMENT: State of the art electric generating facilities should be omitted from the rules if they are to be sited in already overburdened communities. N.J.A.C. 7:27D-3 allows new natural gas-fired power plants to use monies from the Fund, which would effectively add more greenhouse gas emissions from New Jersey power production facilities in aggregate. New Jersey should not fund new electric generating facilities if they are sited in neighborhoods that are already suffering from significant amounts of pollution and if they increase pollution loads in these communities.

RESPONSE: The Act identifies grants and other forms of financial assistance to support efficient electric generation facilities that are state of the art, as determined by the Department (see N.J.S.A. 26:2C-51b(1)), as a proper use of the Fund. If natural gas-fired power plants are funded, and if they displace facilities using fuels with a higher carbon content than natural gas, then new natural gas-fired power plants would reduce greenhouse gas emissions, which is the primary goal of the Fund. Also, replacement of other fuel burning equipment, including electric generating units (EGU), usually results in lower emissions of all pollutants. This is especially true for CHP facilities that replace older boilers at an existing facility. For any new EGU, air quality impacts are evaluated as part of the air permit process to ensure protection of air quality in the community. The concerns cited by the commenter may properly be addressed in an agency's evaluation of co-benefits.

20. COMMENT: The rules do not encourage funding of smaller cogeneration units. While these units are often more costly, they should not be left out. Given the Governor's desire to add 1,500 MW of cogeneration capacity in the State and the imposition of RGGI requirements, units

under 20 MW might become desirable around the State. Instead of mandating the same efficiency levels as larger units, it may be more advantageous to allow a lower efficiency unit to be eligible to achieve the overall goal of reducing greenhouse gas emissions. (2)

RESPONSE: N.J.A.C. 7:27D-3.1 establishes a minimum efficiency standard of 65 percent for cogeneration units. That standard should be readily achieved by smaller CHP units while still effectuating the Act's purposes of reducing greenhouse gas emissions and using energy more efficiently.

21. COMMENT: The proposed rules should be technology-neutral and provide EDA with the flexibility to fund new and innovative technologies that will enable the State to achieve the goals of the Act and the Energy Master Plan. The rules should clarify that, regardless of technology, any generating facility meeting the proposed heat rate requirements for the given nameplate capacity should be eligible to receive funding. (12)

RESPONSE: The rules are performance-based and do not pick technology "winners," nor do they rely on any specific manufacturers. Any generating facility that meets the proposed heat rate requirements for the given nameplate capacity is deemed state of the art for purposes of determining eligibility for funding under N.J.A.C. 7:27D-3.1. The rules do, to a certain extent, favor certain combined heat and power facilities as consistent with the goals of the Act.

22. COMMENT: N.J.A.C. 7:27D-3 should broaden the definition of state of the art electric generating facility to include innovative technologies. In particular, energy storage applications should be eligible for funding. (12)

RESPONSE: The phrase "state of the art" is generally used to refer to technologies that are proven and accepted as being the best of those technologies currently in use for a given purpose. N.J.A.C. 7:27D-3 is limited to electric generation efficiency, defined in terms of heat rate. The purpose of the state of the art provision of the rules is to allow EDA to provide funding to new, efficient electric generation facilities under the priority ranking system.

Even if the term were more broadly defined, extending the definition to include systems such as energy storage is unwarranted. N.J.A.C. 7:27D-3 is not a mechanism for identifying all new technologies as state of the art. It applies only to electric generating facilities. Energy storage systems cannot be considered electric generating facilities, since their purpose is to store energy rather than to generate electricity.

23. COMMENT: Proposed N.J.A.C. 7:27D-3.1(a)6 states that the heat rate performance standards are based on higher heating values. However, the heat rate calculations in the Department's source document (Gas Turbine World 2008 Performance Specs, 25th Edition) are based on lower heating values. This discrepancy should be addressed either by changing the rules to read "lower heating values" or by converting the rules' heat rate values to higher heating values by using the standard conversion ratio 1.11 lower heating value = higher heating value. This would result in the high heating value (HHV) target's being set at 6,882 MMBtu per

kilowatt-hour. A similar adjustment should be made for facilities of less than 240 MW as well. (8, 10, 12)

RESPONSE: The Department acknowledges its error in referring in the rule at N.J.A.C. 7:27D-3.1(a)6 to high heating values rather than low heating values, and is modifying the provision on adoption to replace "high" with "low." As set forth on page 68 of Gas Turbine World 2008 Performance Specs, to which the Department referred in the summary of N.J.A.C. 7:27D-3.1 (see 41 N.J.R. at 837), "for gas turbine project design, heat rate is universally understood to be LHV [low heating value] rather than HHV [high heating value]." Described very simply, the high heating value of fuel is the total amount of energy that is produced from combustion of the fuel. Some of this energy, however, is used to evaporate water produced as part of fuel combustion, making the energy unavailable for electricity generation. The low heating value is the available energy. Therefore, requirements related to the efficiency of an electric generation facility must be based on the low heating value of fuel.

24. COMMENT: N.J.A.C. 7:27D-3.1 should clarify that compliance with the heat rate standard need only be demonstrated once, during the application process. After the award, continued filing of information should not be required. In its application, an applicant should indicate the generation technology it is using and provide specifications indicating the heat rate for the technology. If the applicant meets the heat rate standard, it satisfies the state of the art requirement. (8, 10)

RESPONSE: The Department does not agree that the rule should expressly limit any demonstration on the part of the facility to the initial demonstration made as part of the state of the art determination. If the funding agency wishes to require such an ongoing demonstration as part of the conditions of its funding, the Department's state of the art determination should not prevent it from doing so. The rule is therefore neutral on this point.

Before actual installation of the unit, the applicant is also required to obtain an air pollution control permit from the Department to construct and operate the unit. As a result of the air permit review process, the Department's air permitting program may require the applicant to demonstrate equipment design efficiency.

25. COMMENT: The criteria for state of the art should be expanded to include other aspects of a facility's design that provide other environmental, economic, and community benefits, such as reducing the use of potable water, reducing the introduction of any new waste water discharge structures in the State's rivers, streams, and other bodies of water, and locating the facility in an areas designated as "in need of redevelopment" in accordance with a State, County, or local redevelopment plan. (8)

RESPONSE: The rules define the term "state of the art" in order the implement the Act's authorization to fund new, efficient electric generation facilities that are "state of the art, as determined by the Department." The funding provisions of the Act address projects that will result in reductions in energy use and greenhouse gas emissions and mitigate the impacts of such

greenhouse gas reductions on utility ratepayers. The concerns expressed by the commenter can be addressed by an agency as part of its scoring process that addresses co-benefits.

26. COMMENT: Some of the equipment listed in Gas Turbine World is not commercially available or is no longer offered by the original equipment manufacturers. Two of the machines listed in that source were supposed to offer very low heat rates, and therefore their unavailability can skew an average heat rate calculation unfairly low since they are not actually available in the marketplace. Also, the 50 Hz machines listed in Gas Turbine World are not available for domestic use and the Department should clarify that they are not included in the heat rate target numbers. (8)

RESPONSE: The Department used the manufacturer's design data published in Gas Turbine World 2008 Performance Specs for engines manufactured after 1994-1995 for deriving appropriate minimum heat rates for funding different-sized machines. The machines cited by the commenter as not being commercially available do not change the result. After plotting heat rate data for machines of different capacities (in megawatts), the heat rate minimums in N.J.A.C. 7:27D-3.1(a)3 were derived based on the most efficient 50 to 60 percent of machines in the category, not the most efficient of all the machines. The heat rate minimums are the average in the category; therefore, two or three machines with low heat rates will not skew the minimum heat rate.

The design data, including heat rates, of machines between 50 Hz and 60 Hz are often similar. The Department based the heat rates in the rule primarily on 60 Hz machines. The fact that some 50 Hz machines are not available for domestic use should not impact the heat rate.

7:27D-4 Local Government Greenhouse Gas Reduction Program

27. COMMENT: Achieving the necessary changes in land use policy to reach the 2050 greenhouse gas emissions limit will require working closely with municipalities. Grants from the Fund must begin to facilitate the necessary changes in land use policy by using such grants to promote zoning for higher densities in smart growth locations; support a pilot county-level land use and transportation planning initiative that will reach the State's greenhouse gas targets more efficiently and that builds on the county-level wastewater and transportation planning already underway by offering key counties grants to prepare greenhouse gas Reduction Plan Elements; allow municipalities to take full advantage of their transportation assets by planning for compact growth in the vicinity of their transit facilities; and help rural municipalities combat low-density sprawl. (1, 3, 9, 11, 14)

RESPONSE: Such uses of the Fund are consistent with the rules and can be taken into account in funding award decisions.

28. COMMENT: The preparation of greenhouse gas inventories and measurement of carbon footprints should be authorized under the professional services portion of the grant program. The State wants a measurable reduction in greenhouse gases, but such reductions are not measurable without first completing inventories. (7)

RESPONSE: Both the Act and N.J.A.C. 7:27D identify reductions in greenhouse gas emissions as a primary basis for awarding funding, while making clear that such reductions must be measurable. Because of their value in informing appropriate greenhouse gas reduction strategies, projects that involve greenhouse gas inventorying and carbon footprinting are eligible for funding if they are clearly linked to subsequent implementable actions that will result in a measurable reduction in greenhouse gas emissions or a measurable reduction in energy demand.

29. COMMENT: The proposed process by which the Department will distribute funding to support the Local Government Greenhouse Gas Program is appropriate. (12)

RESPONSE: The Department acknowledges the commenter's support for the rules.

Federal Standards Statement

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65) require State agencies that adopt, re-adopt, or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis.

The adopted rules are not promulgated under the authority of or in order to implement, comply with or participate in any program established under Federal law, or under a State statute that incorporates or refers to Federal law, Federal standards, or Federal requirements. Accordingly, Executive Order No. 27(1994) and N.J.S.A. 52:14B-1 et seq. do not require a Federal standards analysis.

Full Text of the adoption follows (additions to proposal indicated in boldface with asterisks *__thus__*; deletions from the proposal indicated in brackets with asterisks *[thus]*).

N.J.A.C. 7:27D Global Warming Solutions Fund Guidelines and Priority Ranking System

Subchapter 3. State of the Art Electric Generating Facility

N.J.A.C. 7:27D-3.1 State of the art electric generating facility

(a) An electric generation facility is state of the art for purposes of N.J.A.C. 7:27D-2.1(b)2, if it:

1.- 5. (No change from proposal.)

6. Heat input shall be determined based on the *[high]* *__low__* heating value of the fuel used at ISO conditions set forth at (a)5 above.