STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 03-E-0188 – Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard.

ORDER APPROVING IMPLEMENTATION PLAN, ADOPTING CLARIFICATIONS, AND MODIFYING ENVIRONMENTAL DISCLOSURE PROGRAM

Issued and Effective: April 14, 2005

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STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service Commission held in the City of Albany on April 13, 2005

COMMISSIONERS PRESENT:

William M. Flynn, Chairman
Thomas J. Dunleavy
Leonard A. Weiss
Neal N. Galvin

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BY THE COMMISSION:

I. INTRODUCTION

By Order issued September 24, 2004,[1] the Public Service Commission adopted a policy of increasing to at least 25 percent the proportion of electricity derived from renewable resources used by retail consumers in New York State. Consistent with this policy, we also adopted a Renewable Portfolio Standard (RPS) Program. In this Order, we approve the Implementation Plan[2] the Department of Public Service

[1] Case 03-E-0188, supra, Order Regarding Retail Renewable Portfolio Standard (issued September 24, 2004) (September 24 Order).

[2] Attached as Appendix A.

(DPS) Staff prepared to effectuate the RPS Program. As we discuss when addressing the specific elements of the Implementation Plan, one of its notable features is its recognition that flexibility on our part, and the continued involvement of the parties, are required as the RPS Program develops. We also clarify a harvest biomass issue as well as the distinction between resource eligibility and generator eligibility for the purpose of determining vintage. In addition, the Order slightly modifies the Environmental Disclosure Program[3] so it can better inform consumers of the relationship between their financial contributions and the resulting benefits of the RPS Program. Finally, we discuss the reliability impacts of wind generation.

II. BACKGROUND

In adopting the RPS Program, the Commission, *inter alia:* established two tiers of eligible renewable resources (Main Tier[4] and Customer-Sited Tier); set annual, incremental megawatt hour (MWh) renewable energy targets for the years 2006-2013; required the use of financial incentives to encourage the development and operation of eligible renewable generation facilities; directed the use of a non-bypassable wires surcharge on certain delivery customers of each of the State's investor-owned utilities to raise the revenue necessary to support the program; and adopted a central procurement model to be administered by the New York State Energy Research and Development Authority (NYSERDA).[5]

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[3] Case 94-E-0952, In the Matter of Competitive Opportunities Regarding Electric Service, Opinion and Order Adopting Environmental Disclosure Requirements and Establishing a Tracking Mechanism (issued December 15, 1998).

[4] In the September 24 Order, we also established a category of "maintenance resources" for facilities placed in service before January 1, 2003 that, based upon certain criteria, may be deemed eligible for RPS support.

[5] NYSERDA will contractually commit itself to provide RPS Program funds to eligible generators that sell energy into the wholesale spot market and will base those payments on the quantity of energy sold into that market.

The September 24 Order also directed Staff to submit, by March 31, 2005, an implementation plan for our approval that would address in more detail the various elements of the RPS Program that we discussed in general terms. These matters include, but are not limited to: criteria and procedures to certify facility eligibility; procurement and pricing methodology that may be used by the central procurer for Main Tier and Customer-Sited Tier resources;[6] criteria for establishing eligibility of certain existing hydroelectric facilities of five megawatts or less, existing direct combustion biomass facilities, and existing wind facilities not currently eligible to participate in the RPS Program; a process to establish the eligibility of additional resources not currently eligible for participation in the RPS Program; potential modifications to the Environmental Disclosure Program to accommodate the RPS Program, including development of a mechanism to ensure the allocation and disclosure of renewable power related to the RPS Program surcharge to the retail customers paying that surcharge; design of an on-going monitoring and evaluation program; the process and issues appropriate for 2009 and 2013 reviews of the RPS Program; and projected administrative, evaluation, and monitoring costs.

At the time of the issuance of the September 24 Order, we anticipated that NYSERDA's initial procurement solicitation for the 2006 program year would occur in the summer of 2005, which would allow six months to assess carefully various aspects of the RPS Program's implementation before the development of the full Implementation Plan. The subsequent extension of the federal Production Tax Credit,[7] however, led us to authorize NYSERDA to conduct a "Fast-Track" procurement solicitation during the December 2004-January 2005 time-period to take advantage of the opportunity to save

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[6] The discriminating factor between these tiers is the point of interconnection. Main Tier projects are grid connected and Customer-Sited Tier projects are behind-the-meter in retail customer facilities. Main Tier projects would typically be medium to large-scale electric generation facilities. In contrast, customer-sited facilities would typically be smaller facilities using emerging technologies that cannot compete economically with the larger projects.

[7] 108 P.L. 357, 118 Stat. 1418, H.R. 4520, 108th Cong. (2004).

New York ratepayers potentially tens of millions of dollars.[8] This procurement resulted in contracts with seven facilities that are expected to generate 821,611 MWh per year.[9]

A notice of proposals pertinent to the Implementation Plan was published pursuant to the State Administrative Procedures Act (SAPA) in the State Register on November 10, 2004. Sixteen parties submitted comments,[10] including: AES-NY, LLC; (AES);[11] Airtricity, Inc. (Airtricity); Community Energy, Inc. (Community); Conservation Services Group, Inc. (Conservation); Constellation Companies (Constellation); Delta Pressure Generation Systems, LLC (Delta); Enel North America (Enel); Independent Power Producers of New York, Inc. (IPPNY);[12] Joint Utilities (JU);[13]

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[8] Case 03-E-0188, supra, Order Authorizing Fast-Track Certification and Procurement (issued December 16, 2004) (December 16 Order).

[9] The target for the first year, 2006, is approximately 1,121,000 MWh, exclusive of the renewable energy expected to be acquired by LIPA.

[10] Most of the comments were filed on or before December 27, 2004, the end date of the SAPA comment period. Staff and NYSERDA met with many of the parties active in the RPS proceeding after issuance of the September 24 Order and on February 18, 2005 hosted an all-parties meeting that addressed several implementation issues. At Staff's invitation, several comments were filed after the all-parties meeting.

[11] AES also filed supplemental comments.

[12] IPPNY is a trade association representing the independent power industry in New York State. Its members include more than 100 companies involved in the development, operation and ownership of electric generators and the marketing and sale of electric power in New York.

[13] JU consists of Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation, Orange and Rockland Utilities, Inc. and Rochester Gas and Electric Corporation.

Multiple Intervenors (MI);[14] New York Independent System Operator (NYISO); Plug Power Inc. (Plug); Renewable Energy Technology and Environment Coalition (RETEC);[15] Small Hydro Group (Hydro);[16] Taylor Recycling Facility (Taylor); and WPS Power Development, LLC (WPS). All of the elements contained in the Implementation Plan are discussed in this Order, which generally adopts the proposals as modified based on comments.

III. CRITERIA AND PROCEDURES TO CERTIFY FACILITY ELIGIBILITY

A. Proposal

In designing effective and transparent eligibility and certification procedures, the notice proposed that we consider these objectives:

- provide certainty to developers to minimize pre-development cost and risk due to uncertainty in potential eligibility;
- minimize administrative burdens to generators and regulators;
- minimize time requirements so as not to unduly slow the procurement process;
- ensure that only eligible projects are certified;

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[14] MI is an unincorporated association of approximately 55 large commercial and industrial energy consumers with manufacturing and other facilities located throughout New York State.

[15] RETEC members include: American Lung Association of New York State; American Wind Energy Association; Citizen's Advisory Panel; Community Energy; Fuel Cell Energy, Inc.; Hudson River Sloop Clearwater; Natural Resources Defense Council; New York Lawyers for the Public Interest; New York League of Conservation Voters; New York Public Interest Research Group; New York Renewable Energy Coalition; New York Solar Energy Industries Association; Pace Energy Project; Plug Power; PowerLight; Public Utility Law Project; Riverkeeper; Scenic Hudson; Sierra Club Atlantic Chapter; Solar Energy Industries Association; Sustainable Energy Developments, Inc.; and Union of Concerned Scientists.

[16] The Small Hydro Group consists of: Tannery Island Power Corporation, Hydro Power, Inc., Energy Enterprises, Inc., Chittenden Falls Hydro Power, Inc., Seneca Falls Power Corporation, and the Village of Potsdam.

- create an open and transparent process; and
- afford confidentiality to developers during the development process.

Although the notice did not explicitly distinguish between Main Tier and Customer-Sited Tier projects, it did state that different certification procedures satisfying these objectives might be appropriate in some circumstances. For instance, all potential renewable energy projects could be required to seek provisional or operational certification by NYSERDA as a pre-condition for participating in an authorized central procurement solicitation (projects that are not so certified would not be eligible to participate in the RPS Program). Provisional certification would be necessary for facilities that are not yet constructed. Operational certification would be required for facilities that are constructed and operating at the time of the procurement and for all provisionally certified facilities prior to the payment of any incentives.

The notice proposed that we assign to NYSERDA the task of developing the appropriate forms for demonstrating such certification and authorize NYSERDA to make the initial determination of eligibility. Any information submitted during the provisional certification process would be subject to further verification once the facility is complete. The Commission would hear any appeals of NYSERDA's decisions. In addition, developers would be able to identify information that they believe should be treated confidentially during the provisional certification process pursuant to New York Public Officers Law (POL) §87(2) (d), Public Service Law (PSL) §15, 21 NYCRR Part 501, and 16 NYCRR Part 6. The notice further proposed that, to ensure on-going eligibility, renewal of this certification should occur periodically, perhaps once every two years.

B. Main Tier

a. Comments

AES and RETEC urge us to adopt clear and concise guidelines on certification of RPS Program eligibility. For Main Tier resources, RETEC supports the proposal regarding advisory rulings and provisional and operational certification to prevent unrealistic bids from blocking viable projects. RETEC also does not oppose the

establishment of an appeals process provided that an appeal would not result in delays in procurement.

AES and IPPNY request that we hold a technical conference prior to finalizing biomass requirements, such as harvest and timber management plans, because it is critical, in their view, that all entities involved in the biomass infrastructure have the opportunity to discuss the impacts of RPS Program certification requirements on the development of biomass renewable resources.

Community urges us to direct NYSERDA to allow suppliers the flexibility of fulfilling their contractual obligations by aggregating the output from multiple eligible plants rather than relying on only a single plant. This, it states, would no doubt create lower pricing for NYSERDA and ratepayers based on suppliers' ability to hedge themselves against production and price risk with a portfolio of multiple renewable energy suppliers.

b. Discussion

Many states, such as California, Massachusetts, Texas, Wisconsin, Connecticut, New Jersey, and Nevada, have enacted certification processes for determining resource eligibility for RPS Program procurement. Based on a review of such policies and processes and the objectives proposed in the notice, as well as an analysis of the comments, we authorize institution of a formal eligibility certification process. This process should be designed to accommodate not only the supply of energy from one specific generator or resource, but also, as suggested by Community, the supply of energy that is aggregated or packaged from more than one eligible facility or resource. To streamline the process, we will authorize to the Director of the Office of Electricity and Environment of the Department of Public Service (OEE Director) to issue the determinations discussed below; appeals of determinations may be filed pursuant to the Commission's Rules of Procedure. NYSERDA should develop the appropriate forms and documents to effectuate this procedure. The certification process shall contain the following elements:

1. Advisory Opinion[17]

Advisory opinions with regard to eligibility of projects or resources may be requested at any time. A request for an advisory opinion must be submitted to NYSERDA with sufficient data to allow full evaluation of eligibility, and additional information may be required. NYSERDA will then forward the request, with an analysis, to the OEE Director for review. The OEE Director will thereafter provide an Advisory Opinion on eligibility to the requesting party and NYSERDA within 30 days of the date on which the application is deemed complete.

2. Provisional Certification

Provisional Certification affirms that a project can meet the RPS Program's eligibility criteria. Only after the project is provisionally certified may it be considered for the awarding of an RPS Program contract, ultimately receiving RPS Program funding support based on energy sold into the NYISO spot market if it receives Operational Certification, as described below. Depending on the procurement model to be employed, Provisional Certification may be required prior to consideration of proposals. Proposal sponsors must include in their submissions to NYSERDA data pertaining to facility and fuel characteristics, as appropriate to the resource, in sufficient detail to enable a full evaluation regarding eligibility. Additional information may be requested as NYSERDA deems appropriate. After analyzing the submissions, NYSERDA will forward the results of its analyses and recommendations to the OEE Director, who will make a determination regarding Provisional Certification.

3. Operational Certification

Operational Certification will be required once the project is ready for operation but before payments under the RPS Program contracts will be made by NYSERDA. Upon verification by NYSERDA that the project has been constructed and/or will operate in accordance with the proposal submitted for which Provisional Certification was granted, NYSERDA will recommend to the OEE Director whether or

[17] We will use the term "advisory opinion" rather than the proposed term "advisory ruling" to avoid confusing this process with the Commission's administrative process.

not Operational Certification should be granted. Such verification may be based on document audits, site visits and attestations.

Notice that Operational Certification has been granted or denied by the OEE Director will be made, if practicable, within 30 days of commencement of NYSERDA's review. If Operational Certification is denied, then the project sponsor will be advised of the basis for the denial and may submit a subsequent request for Operational Certification once the identified problems are corrected. RPS Program support payments will not be made until Operational Certification is obtained. RPS Program contracts should include a provision advising parties that NYSERDA will remain entitled, for the duration of RPS Program contracts, to seek such information from contracting parties and to perform such investigations as may be required to allow confirmation that the facilities continue to operate in accordance with their Certifications.

C. Customer-Sited Tier

a. Comments

Advisory opinions and Provisional and Operational Certification steps are not necessary for customer-sited resources, RETEC and Plug assert, because these resources are comparatively easy to install. These parties argue that the Customer-Sited Tier should always be seen as a program that invests in mechanically viable equipment that is not yet price competitive. Therefore, the RPS Program should only be used to support products that have a proven record of field performance.

Plug advises that because products are evolving at a rapid pace in the fuel cell industry, eligibility decisions should be based on a variety of factors to ensure "high quality" installations, including: the use of a list of eligible equipment, a manufacturer's record, the record of products that are precursors of a proposed project, and minimum performance guarantees. Plug states that the September 24 Order explained that the purpose of this tier is to ensure the "continued and accelerated development" of emerging technologies. It argues, therefore, that fuel cell equipment that was manufactured years ago using technology that is not currently being developed and that holds little or no promise of future development should not be eligible under the Customer-Sited Tier.

Instead, only equipment that is currently being manufactured and marketed should be eligible for participation.

RETEC asserts that only new, commercially available equipment should be eligible for RPS Program support. It argues that we should consider establishing a vintage requirement, excluding equipment manufactured earlier than a set date to ensure best use of limited resources. RETEC also urges removal of the 300 kW limitations for customer-sited wind energy facilities because, in its view, there is no reason to continue this cap. It acknowledges, however, that larger facilities could absorb the bulk of the RPS Program funding assigned to this tier; it proposes, therefore, that any project larger than one MW should be allowed to participate in Main Tier procurements instead.

Plug asserts that NYSERDA should maintain a list of certified fuel cell systems that are eligible to receive awards under this tier. Plug offers as criteria for eligibility:

- the likelihood of meeting performance guarantees;
- the field record of the product and its precursors;
- the availability of trained installation and service personnel;
- third party safety certifications, Underwriters Laboratory listing, documentation manuals; and
- current manufacturing and marketing status of the equipment.

Plug suggests that establishment of a list would allow participants to react swiftly to marketing opportunities rather than having to experience delays waiting for their equipment to be deemed eligible after an application for an award is submitted. It states that maintaining a list will provide NYSERDA with the opportunity to evaluate potentially eligible equipment in a timeframe that is not subject to the demands of an imminent marketing opportunity.

b. Discussion

Applicants will be required to complete project description and information forms that NYSERDA will provide. The information on the forms must identify the resource to be installed in accordance with our Customer-Sited Tier eligibility

requirements. We agree that detailed pre-certification and eligibility requirements are not necessary for the Customer-Sited Tier because determining whether or not a project meets eligibility requirements is a relatively simple matter that should be readily evident upon review of the application forms that NYSERDA will develop. NYSERDA should develop requirements to demonstrate commercial readiness. In addition, there is some merit to Plug's suggestion that NYSERDA maintain a list of certified fuel cell systems that are eligible to receive awards under this tier to allow participants to react swiftly to marketing opportunities. In the current System Benefits Charge (SBC) program, a list of eligible small wind systems is used to ensure that the systems have a performance track record. Accordingly, NYSERDA should give careful consideration to developing a list of eligible fuel systems.

Plug's assertion that eligibility criteria should be used to ensure that awards are granted only for fuel cells that are ready for commercial performance fails to recognize that the installation of high quality technologies that provide renewable power to customers over the design life of the technology is an important goal of the program and that the Customer-Sited Tier is more akin to a deployment program for new technologies than it is a research program. Strategies should be incorporated into the program to ensure high quality installations.

We agree with Plug that the implementation of the Customer-Sited Tier should be structured to encourage widespread participation by small customers, and should be reevaluated on an annual basis. Funding allocation and program design will be evaluated on a regular basis to evolve with technology and market changes. It is important, however, to provide the market with some certainty about a level of funding to encourage private investment in technology development and distribution mechanisms. Thus, customer-sited resources should remain eligible for the RPS Program incentives, as RETEC proposes, even when receiving federal grants and tax credits.

Similarly, we agree with Plug's suggestion that a portion of the Customer-Sited Tier should be allocated for customers of 25 kW or less. We expect to allocate funding by technology first and then by program options within the technology.

Incentive levels will likely be varied by the size of the application. Larger systems should generally require less of a capacity-based incentive. The intent of the customer-sited program is to support the installation of eligible technologies that will primarily serve the needs of customers. The majority of customers are expected to have power requirements less than 25kW.

RETEC's recommendation that we impose a one MW per project funding cap is reasonable. Rather than arbitrarily limiting the size of the system, however, incentive levels and programs should be designed to encourage the installation of eligible systems that are appropriate to meet customers' load. The incentive level should vary by the size of the facility.

RETEC's suggestion, that we erred in the September 24 Order in limiting eligibility for customer-sited wind energy facilities to 300 kW or fewer, should be explored further. The size limit was originally determined by the availability of wind systems that targeted on-site applications. Larger systems could be made eligible for the Customer-Sited Tier if the primary objective is to produce power for on-site applications. Staff and NYSERDA should address this issue, in consultation with the parties as appropriate, and submit a recommendation for our consideration in the as early in the fourth quarter of 2005 as possible.

Finally, eligibility of customer-sited resources generally will be limited to customers who pay the RPS Program surcharge. By definition, the primary beneficiaries of the Customer-Sited Tier are individual customers, and it is, therefore, appropriate to award RPS Program funding only to those customers who make RPS Program contributions. At the discretion of the OEE Director (and appealable to the Commission), exceptions will be made in certain circumstances that are deemed to have a more widespread benefit.

IV. PROCUREMENT AND PRICING METHODOLOGIES FOR MAIN TIER RESOURCES

As described in the September 24 Order, NYSERDA, as central procurer, will provide a financial incentive in the form of a premium payment to renewable suppliers based on energy sold into the New York wholesale spot market. Such a structure (or some similar form) is intended to ensure that New York State ratepayers obtain an identifiable result from the RPS Program surcharge on their bills.

The energy targets for procuring new renewable supplies set out in the September 24 Order begin in 2006 and steadily increase through 2013. Multiple procurement cycles are expected; successive procurement quantities may be modified commensurate with the quantities placed under contract by NYSERDA in preceding procurement cycles.

A. Proposal

To attain RPS Program objectives, the notice stated, it is likely that a variety of distinct procurement situations (e.g., number of projects bidding, project sizes, types, and market conditions) would affect the design and implementation of the procurement process. The notice proposed that we authorize NYSERDA, as each successive solicitation provides information from the market and feedback on the solicitation process, to modify procurement procedures and methods to enhance the effectiveness in meeting the overall RPS Program goals.

2. Models

The notice stated that the procurement processes and choices would likely need to adapt and evolve in response to changing market conditions. Given the different categories of renewable projects, the renewable resources market could be segmented into homogeneous groups (e.g., existing/operating resources that require no financial support but are eligible for the RPS Program, eligible developing resources that need financial support, and existing resources that demonstrate economic hardship). Additional factors mentioned in the notice that could further segment the market for renewable energy, include:

- Locational wholesale market prices that may alter the competitive economics for similar projects in different locations;
- Contract terms and conditions needed for different project types might vary; and
- Financing requirements might vary by project size and type.

The notice proposed that we authorize NYSERDA to use its discretion in choosing among three procurement models or formats: 1) auction; 2) request for proposals (RFP); and 3) standard offer.

3. Product Pricing

Another critical consideration in procurement and contracting is the form of product pricing employed. The notice proposed several options that we should consider authorizing NYSERDA to use. These include:

- fixed single price for entire term;
- schedule/preset but varied prices over term;
- indexed pricing; and
- contracts for differences (CFDs),[18] including variants.

B. Comments

1. Procurement Models

RETEC, IPPNY, and WPS urge us to authorize NYSERDA to use any combination of the three proposed procurement options during different phases of the RPS Program as the renewable market in New York matures further. RETEC also explains that it may be appropriate to differentiate procurement options based on project size. MI suggests that it would be an improper delegation of the Commission's statutory responsibilities to allow NYSERDA the discretion to choose among the three procurement approaches.

[18] Although there are variations, a simple CFD in this context would involve NYSERDA paying the difference between the spot market price obtained by a generation provider and an agreed-upon price between the generation provider and NYSERDA.

AES and IPPNY assert that the auction option is the best procurement methodology. They state that the most competitive market outcome would occur when the market is standardized, bidders have similar information, and the award process is visible so interested parties can utilize this information in future procurement solicitations. JU advocates use of the Descending Clock variation of the auction model.[19] It argues that this variation minimizes acquisition costs in comparison to other auction variations that are typically designed to maximize revenue to sellers.

Airtricity insists that using a standard offer approach is the best way to procure RPS resources because it more closely simulates the competitive market, but that the auction approach is preferable to the RFP approach. In its experience in the United Kingdom and in several states, winning bids often do not result in actual projects being built. Airtricity explains that whether the cause is unrealistic bid prices, inexperienced developers, or overly enthusiastic bidders, the result too often is a winning RFP bidder that cannot finance its projects. Airtricity also sees as a shortcoming of the RFP approach the "start-stop" nature of government solicitations, because it stymies smooth and steady growth.

In contrast, MI argues that using an RFP with a cost-based CFD is the best way to minimize costs. MI insists that we not give NYSERDA discretion to choose among procurement options but instead should exercise our responsibility to protect ratepayer resources and determine the one best procurement method.[20]

MI recommends that we require NYSERDA to issue an RFP that is tailored to focus on price and require that the successful bidders operate on peak, when feasible operationally. Because this is a regulated subsidy program funded by ratepayers and not part of competitive energy markets, MI continues, bidders should be required to provide

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[19] Descending bid (or clock) auctions are open auctions where bidding starts at a high price. The auction price is lowered in increments until the amount of the commodity offered equals the amount sought.

[20] MI suggests holding a collaborative meeting among the parties to discuss procurement issues.

specific cost information so that the generator receives only the minimum subsidy that is required to allow it to earn a fair profit. This party asserts that requiring NYSERDA to pay the bid price is less favorable than the cost approach, but is better than a market-clearing auction approach, which costs more and provides no additional benefits to ratepayers.

According to Airtricity, auctions, like RFPs, may run the risk of forcing prices too low for a project to obtain financing. However, if the Commission decides not to preclude use of the auction approach, Airtricity recommends that NYSERDA should set its initial offering price at a high enough level (say $40-50 per MWh) to encourage bids and market investment. It advises that if the number of bids and amount of capacity is "too high," then NYSERDA can adjust the price and capacity in subsequent auctions. Airtricity also recommends that the duration of contracts should be at least 10 years to satisfy investor concerns that they have a reasonable opportunity to recover their investments. AES states that due to the high incremental cost to operate a biomass plant versus the low incremental cost to operate a wind farm and to ensure diversity of potential renewable resources, one or more separate solicitations for renewable attributes should be targeted to biomass applications (including co-firing biomass applications). This party asserts that a biomass-specific solicitation should not require a contract term greater than three years to allow biomass facilities to better manage supply availability, supply price risk and off-peak pricing risk.

2. Product Pricing

AES, IPPNY, and the NYISO object to the use of a CFD because, they claim, insulating renewable resources from market prices could result in: severely depressed prices during hours when the renewable resources are most available; failure to provide market-based economic signals to site renewable resources in geographical areas that most need new generation in order to provide the maximum market benefit; improperly insulating RPS Program resources from the normal incentives provided by market forces to produce electricity when locational-based market prices (LBMPs) are higher than the resource's incremental production costs, and to cease production when

LBMPs fall below production costs; and forcing existing generators to pay load serving entities to take power to remain at least at minimum generation load. The NYISO encourages us to adopt mechanisms that encourage new RPS resources to locate in areas where additional energy is most needed and to operate when prices are at levels that permit recovery of operating costs for these units.

IPPNY agrees that some of the problems associated with CFDs could be ameliorated if NYSERDA and the NYISO forecast energy prices and these prices were used to determine the premiums implicit in each of the total price bids and to rank the bids based upon minimizing the premium. IPPNY notes that such forecasts are prone to errors and the proposal would place the entire risk of any errors on ratepayers. Further, according to IPPNY, the CFD approach cannot be applied to out-of-state resources because they are not required to deliver the energy they produce into New York at the time it is produced; and, it will be difficult to define the difference because the delivery period will be independent of the time at which the energy is generated. It will also be difficult to determine the difference associated with imports, IPPNY asserts, because the NYISO does not estimate a price for the resources' location. Moreover, IPPNY asserts that the CFD approach would greatly complicate NYSERDA's bid evaluation process.

For Airtricity, the standard offer approach would yield the best results for the RPS Program because it significantly reduces financial uncertainty, and thus the cost of financing. It suggests tempering the standard offer approach (again set at $40-50 per MWh) with CFDs, with the standard offer becoming the "strike price." If project revenue from the sale of energy, Unforced Capacity, and ancillary services were less than the strike price, then NYSERDA would pay the difference in the form of an RPS premium. In contrast, MI asserts that the standard offer approach could result in developers receiving a greater subsidy than what they truly need.

Airtricity discounts the criticism that use of CFDs would insulate renewable developers from market signals because there is no reason why a wind project would not be selling its maximum energy output into the market. According to Airtricity, the intermittent nature of the wind resource, not economic self-interest, is the limiting factor

in a wind project's ability to respond to market price signals. In the event we remain uncomfortable with the CFD approach, Airtricity suggests limiting CFDs' payments to a defined percentage, e.g., 50% of the difference between the strike price and other energy-related revenues.

IPPNY states that it is possible to design a CFD approach that protects ratepayers and does not compromise the market. It proposes an approach that would pay renewable resources a renewable energy credit price that is inversely indexed to annual average zonal LBMPs. According to IPPNY, this approach is simpler to implement than the CFD approach because NYSERDA would not have to estimate the timing and value of the energy deliveries and would capture broad market changes in the price of energy without making resources immune to timing of deliveries. IPPNY explains that, as the annual average zonal LBMP rises, the renewable attributes price would be reduced. Since the adjustment to the renewable attribute is based upon the annual average change in LBMP, according to IPPNY, it preserves the incentive to produce energy when it is most valuable, while protecting consumers from paying for renewable attributes if energy prices rise to levels where that payment is no longer necessary. Further, because RPS Program payments would not vary with short-term fluctuations in energy prices, renewable resources would be appropriately encouraged to respond to market prices in the same manner, as would any other competitive resources.

MI and RETEC argue that, to prevent overpayments by consumers, the CFD pricing option must be used with a selected generator receiving a customized subsidy based on the cost of development for its particular project. MI asserts that any revenues received by the project in excess of the amount needed to cover the developer's cost of service and a reasonable rate of return on equity must be returned to consumers. MI argues that by shifting the risk of low energy prices from developers to consumers, the CFD approach would reduce financing risk and, therefore, reduce the price of bids. According to RETEC, in the absence of a CFD, wind energy projects may have difficulty obtaining financing.

3. Financial Guarantees and Milestones

AES, IPPNY and RETEC state that we should require NYSERDA to develop measures such as bid deposits, letters of credit, and project milestones to ensure that only credible projects participate and that selected projects are timely constructed. In contrast, Community asserts that the bonding and security requirements in NYSERDA's Fast-Track procurement were onerous for projects that do not have vendor contracts and frame agreements. It argues that sponsors of such projects that are still in the development stage would be reluctant to place so much money at risk.

C. Discussion

1. Procurement

As the comments point out, each of the three proposed procurement methods have strengths and weaknesses depending upon the state of the renewable industry and the energy markets. Accordingly, NYSERDA and Staff should assess carefully the best procurement approach for a particular solicitation round and Staff, for at least the next two procurements, should recommend, for our consideration and approval, the use of one or a combination of the three approaches, or others as appropriate. In addition, we will determine at that time the level of RPS Program funds to be expended.[21]

In preparing for a second procurement, Staff and NYSERDA should survey the Fast-Track procurement bidders and other potential bidders to gather their reactions to the RFP option. Staff and NYSERDA should also invite parties to a workshop to discuss the various alternatives to the RFP format. The markets in which developers find themselves, and in which New York seeks to engage, are indeed uncertain and it may take collaboration among the parties to ensure that the RPS Program objectives are achieved.

A purpose of this collaborative is to consider potential improvements in the procurement structure. Issues that should be addressed include, but are not limited to, the

[21] As more experience is gained, it may not be necessary for the Commission to make these determinations for subsequent procurements.

following:

- Reviewing the RFP process employed for the expedited procurement cycle to determine whether it remains an appropriate mechanism to stimulate the renewable energy market, in contrast to other models used to purchase commodities;
- Identifying market conditions that should be present in order to justify a particular procurement approach;
- Establishing a process for determining the presence of such market conditions and aligning the use of a particular model appropriately; and
- Identifying conditions imposed on market participants and other RPS Program design elements prescribed by the September 24 Order that may need to be modified.

2. Product Pricing

The proposal and comments addressed a variety of pricing structures. The actual structures used for Main Tier procurement will be critical to supporting project financing, an objective of the RPS Program procurement models. The form of pricing should also correlate with the choice of procurement models because of their interdependence. Further, any consideration of a particular price structure should include an assessment of its impact on market behaviors. It may be possible that a pricing structure found to be favorable to the financial community could cause unintended negative consequences when used in the markets administered by the NYISO. Such a circumstance must be considered in any evaluation of product pricing and procurement model.

Similarly, there are numerous variants to consider for the term of any contract. Such terms may vary by procurement cycle and perhaps within any one procurement cycle. Some variants to be considered include:

- single purchase for set number of years;
- several, varied durations (e.g., three, five, ten years); and
- term starting "x "number of years out through a set period (e.g., year four

through eight).

As the comments make clear, determining the best approach to Main Tier product pricing requires evaluation of complex, and often competing, considerations. Insufficient information is available to specify use of any particular approach at this time. Accordingly, NYSERDA and Staff should include in the workshop discussed above issues associated with the use of CFD pricing structures or associated variants and contract terms for future procurement cycles. The parties' comments on pricing and term matters will be considered further when we determine the proper procurement model for the next two solicitations, and we will address pricing and term matters at that time.

3. Financial Guarantees and Milestones

We agree with AES, IPPNY and RETEC that NYSERDA's contracts should include conditions that are designed to ensure that only suppliers that are serious about bringing their projects to commercial operation on a timely basis — and are likely to do so—should be awarded contracts. Requiring a deposit and letter of credit as a condition of a contract award is certainly a reasonable way to accomplish this objective. We are also mindful, however, of the concern expressed by Community. If these instruments are used, the amounts should be set at levels sufficient to discourage participation by suppliers whose facilities have little or no probability of achieving commercial operation, but not be so high as to be onerous, especially for small projects. Staff and NYSERDA are encouraged to explore this issue further at the workshop discussed above.

NYSERDA is expected to require conditions, similar to those suggested by the commentators, to provide confidence that a project has a high likelihood of achieving certain milestones during the year. For instance, NYSERDA could require submission or proof of completion of: a plan and timeline for project milestones; site control; a resource or fuel assessment; a financing plan; acceptance by the NYISO and/or the delivery utility (as appropriate) of an interconnection application and scope of work for any needed interconnection study, with a date in the queue that is prior to a specified date; NYISO approval of the project's System Reliability Impact Study; and/or all

permits and approvals or evidence that all permits and approvals are highly likely to be secured in time for the project to be commercially operational by a specified date.

NYSERDA should also consider including in its RPS Program contracts a condition that provides that failure to satisfy these requirements could result in loss of some or the entire amount of the security. In cases where a marketer or broker or some entity other than the facility owner submits the proposal, it would be appropriate for NYSERDA to require the project sponsor to demonstrate that it would have contractual control of the energy output of the facility.

4. Project Selection Process

Selection and funding of the individual proposals within the procurements will be based on the nature of the authorized solicitations. When an auction is conducted, the rules of the auction and the bids received will determine which bids are to be awarded and the specific funding for each bid within the authorized limits. Under a standard offer solicitation, the overall funding level and rate will also have been determined in advance. Under an RFP approach, the target levels for overall funding will be set forth in the RFP. After proposals are submitted, NYSERDA will rank the proposals in accordance with the selection criteria set forth in the RFP. The individual project funding determinations will then be made by NYSERDA management, after consultation with the OEE Director, based on this ranked list. If Provisional Certification determinations are not required as a precondition to submitting a proposal, the OEE Director will then review the ranked list of projects falling within the procurement funding limits and make Provisional Certification determinations. Proposals that are granted Provisional Certification will become eligible for contracting. NYSERDA will thereafter report to the OEE Director any changes regarding the projects selected.

V. PROCUREMENT AND PRICING METHODOLOGIES FOR CUSTOMER-SITED TIER RESOURCES

A. Proposal

We noted in the September 24 Order the importance of accelerating development of emerging technologies, such as photovoltaic systems, fuel cells, customer-sited wind facilities, and similar technologies, because of their environmental benefits and ability to be sited in urban, heavy-load areas. Consequently, we set aside 2% of the total RPS Program incremental MWh requirement for the Customer-Sited Tier.

The notice explained that a key step in the design of the Customer-Sited Tier is creation of a framework to allocate funds to participants in this category. The notice anticipated that NYSERDA would take into account the technical and market risks resulting from implementation of each technology. The proposed framework would involve reviewing the relative costs and benefits of specific projects using criteria such as:

- cost-effectiveness ($/kW installed compared with $/kWh produced);
- location in specific load pockets;
- peak kW demand reductions;
- economic development (new jobs, job retention, siting of new companies and manufacturing facilities, increased manufacturing output from existing facilities, emphasis on key emerging technologies, development of workforce skills);
- impact of tier technologies on fuel diversity;
- participation by the residential and small business sectors; and
- environmental benefits and reduction of harmful emissions.

According to the notice, in most instances these projects are expected to be small-scale. This would suggest the applicability of the standard offer approach. In the alternative, incentive-based payment structures similar to those employed by NYSERDA in its current SBC programs (e.g., photovoltaic and small wind incentive programs) could be employed. Customized approaches may be appropriate for larger facilities.

The notice proposed that we direct NYSERDA to establish appropriate metrics and weighting factors to determine how funds will be allocated among projects and technologies. The framework and weighting factors could also provide useful information for considering the addition of new technologies to the existing list of eligible technologies. The notice also proposed that we consider whether financial incentives should be provided through a combination of mechanisms, including buy-down incentives, to reduce the capital costs of projects and performance-based incentives to ensure long-term operation of projects.

B. Comments

RETEC states that a capacity-based standard offer rebate program is the best procurement method. It recommends use of the standard offer option as most suitable for the Customer-Sited Tier, although fuel cells greater than 25 kW may be an exception because it may be too difficult to establish the correct price for that technology. RETEC objects to using performance-based incentives at this time because of the current nascent stage of these technologies.

Plug asserts that a combination of the RFP approach for general projects, and the standard offer approach for small projects, would best implement our purpose in establishing the Customer-Sited Tier with respect to fuel cells. Both RETEC and Plug assert that fuel cell spending should be allocated most heavily in the early years of the RPS Program.

Plug states that pre-certification, combined with some form of performance guarantees, would be the best method of ensuring that only field-ready fuel cell systems participate in the RPS. Plug agrees that it is important to establish milestones to ensure that award winners deliver a functioning project within a reasonable time. Milestone periods should begin with the date of award, not the date of a contract, because it may take an indefinite period of time for a contract to be put into place. In the case of small projects of 25 kW or less, according to Plug, milestone dates can be made relatively short. For projects involving an existing host, delivery should occur within six months of an award, and the project should be operational within an additional three months. For

projects involving new construction, the project should be operational within one month of completion of the new construction, but not exceeding 18 months from the date of award. Plug asserts that these milestones will assure that limited allocations will not be taken up by speculative projects. RETEC argues that these milestones are unnecessary for the Customer-Sited Tier. It suggests, instead, use of installation dates, such as those used in the SBC program.

C. Discussion

Based on analysis performed to date and the comments, Staff and NYSERDA should develop, for our approval, an implementation and allocation plan to utilize the Customer-Sited Tier funding efficiently in accomplishing the objectives in the September 24 Order. This funding plan, which Staff should submit to us for our approval as early in the fourth quarter of 2005 as possible, should include a recommendation regarding an initial, base level of funding to be allocated to each eligible technology. We anticipate that these initial, base funding commitments would demonstrate a limited, but definite, commitment to the development of each technology, thereby encouraging investment from the appropriate manufacturing and deployment sectors.

Allocation of the remaining funds to specific customer-sited technologies should be considered annually by NYSERDA and Staff, using the criteria provided by the Commission, based on analyses of market readiness of the technologies and the distribution and installation industry in New York State. NYSERDA and Staff might, where appropriate for evaluation purposes, divide individual category of eligible technologies into subcategories based on size and application. Each of the criteria below would be considered and assigned a relative weight:

- cost effectiveness relative to the retail price of electric power;
- market risk as indicated through consumer awareness, the potential market size, and the availability of deployment services to meet consumer demand;
- the net environmental impact relative to clean fossil technology;
- technical risk as indicated through the stage of product manufacturing, proven field experience and the ability of the technology to meet reasonable

performance standards for the expected life of the technology, which should at least extend beyond 2013;

- the likelihood that manufacturing and/or deploying the technology will maintain or increase employment in New York State;
- benefits to the New York State electric system through reduction in the peak load or the cost of power;
- fuel diversity impact through a reduction in the use of fossil fuels; and
- the potential for residential and small business sector participation.

These criteria could be used as a guide in determining the initial, base funding allocation to each category of eligible technology. Base funding and additional allocations could be adjusted each year based on factors such as interest in the program in previous years and changes in market factors that affect the criteria above.

The funding plan should include recommendations on a combination of front-loaded incentive packages to reduce the installed cost of an eligible technology, performance incentives to ensure long-term operation, and competitive procurement, as appropriate, in order to maximize the effectiveness of the Customer-Sited Tier in achieving the overall goals of the RPS Program. Incentive levels should be recommended in the funding plan, and will be subject to periodic review.

VI. CRITERIA AND PROCESS FOR ESTABLISHING ELIGIBILITY OF CERTAIN EXISTING FACILITIES[22]

A. Proposal

The notice proposed criteria for evaluating a petition filed by: (i) existing hydroelectric facilities of five megawatts or smaller; (ii) existing direct combustion biomass facilities; or (iii) existing wind facilities, currently included in the baseline, that it would apply in assessing a petitioner's assertions that it requires RPS Program support to remain financially viable. The criteria proposed include:

[22] In this context, existing projects are in-state renewable energy projects that were commercially operational prior to January 1, 2003, and, depending on the outcome of the review process described below, may be denominated "maintenance resources."

- an examination of relevant portions of the books and records of the facility (including a documented after-tax cash flow forecast) and, possibly, of the facility owner/operator and any affiliates;
- the basis for, and reasonableness of, expected operating and capital costs. This evaluation may include, among other things, a comparison to prior years' costs and a comparison to costs of like generation;
- any other sources of cash available to the facility, such as:
    a. tax benefits
    b. subsidies
    c. contracts
    d. other sources, including restructuring financing;
- Whether market rules are increasing the costs of the facility and, if so, whether any steps can be taken to reduce such costs;
- Whether the facility's real property tax assessment is consistent with the assessments imposed in similarly situated facilities elsewhere and, if not, what action has been taken to address this matter;
- Whether the facility is required to operate as part of a package of assets that is financially viable as a whole;
- Whether the facility generates enough revenue, based on expected output, to cover its operating costs;
- Whether the facility generates enough revenue to make necessary capital improvements; and
- Whether the facility generates enough revenue to cover its fixed costs, including:
    a. debt service
    b. property taxes
    c. security costs
    d. other costs

The notice proposed two pricing approaches for existing projects:

1. Case-By-Case Approach

The notice suggested that it might be preferable to provide an existing renewable facility with RPS Program support on a case-by-case basis. Pertinent to this conclusion is the expectation that some existing projects might have short-term working capital requirements and a limited ability to borrow, while others might have problems that are longer term in nature. In these circumstances, a standardized procurement approach might not be appropriate.

2. Competitive Bidding

The notice also suggested that it might make sense to consider some sort of competitive bidding (and/or competitive negotiations) among the qualifying existing projects if, for example, the need for assistance exceeds the available resources and, hence, allocation choices must be made. This would be relevant in the situation where there is a limit on the extent to which retail customers would be charged for the provision of assistance to existing projects. In addition, if new Main Tier renewable energy projects are available in the market in excess of RPS Program targets, existing resources should have to compete head-to-head with such new projects. If the support required by an existing facility exceeds that for an eligible new facility, that existing facility would be considered economically obsolete. While there may be other determinative factors (e.g., term of commitment, reliability) so that such a rule should not be applied without consideration of these factors, the notice suggested that public policy and RPS Program objectives might not be best served in paying existing renewable energy facilities more to stay on-line than new renewable energy facilities would require coming on-line.

B. Comments

CEI, Enel, RETEC and Hydro urge that the showing required to be deemed eligible for RPS support not be onerous. AES also asserts that the proposed eligibility criteria for maintenance resources do not adequately consider how a biomass co-firing application should be evaluated. This issue will be addressed in a subsequent section.

Enel points to the Governor's Executive Order 111 as an example of the kinds of actions and initiatives upon which wind developers relied.

RETEC argues that extensive data requirements and review of books and records would be antithetical to building a self-sustaining competitive market. It asserts that these hydro and biomass facilities should be required to demonstrate that they are meeting or soon will meet environmental performance standards that are similar to those required of new generating facilities (e.g., certification as "low impact hydro" and the 3.0 lbs. NOx/MWh standard recommended for new biomass facilities in marginal and moderate non-attainment areas of New York by the Biomass Working Group and 0.6 lbs. NOx/MWh in severe non-attainment areas). Facilities that do not contribute to state-of-the-art environmental improvements should not be subsidized. RETEC also suggests that the Standard Offer approach may be the best procurement option, especially for the very small facilities. Purchasing a portion of a facility's output may be appropriate for the larger facilities as a way to allow facilities to avoid a complicated certification process.

CEI argues that auditing financial data of wind farm owners is not pertinent because other parties are paying premiums under long-term contracts for some of the renewable attributes. Enel states that once a plant is determined to be eligible it should be afforded this status for the duration of the RPS Program period. In addition, it strongly objects to the possibility that affiliates of the owner/operator may need to submit financial information.

IPPNY asserts that we must explain how any criteria we adopt will be applied and that we should also provide clearly defined thresholds that are established upfront. IPPNY requests as well that we clarify that the phrase in the proposal regarding "existing direct combustion biomass facilities" includes existing co-firing capabilities at fossil fuel plants and that the five megawatt threshold for hydroelectric facilities is on a per unit, rather than a per site basis. IPPNY also suggests that we adopt a more streamlined process for projects under one MW in size because these small projects may find the Commission’s information requirements too onerous for them to participate in

the RPS Program. Finally, IPPNY urges institution of a new working group to assist us in better defining the issues.

Hydro urges us to establish a working group process for stakeholders to discuss the above listed "criteria" before their adoption. It states that the list in and of itself does not identify specific criteria; as such, it is not objectionable, but it is not helpful. According to this party, there is a need to discuss what showings must be made for RPS Program support, what projects, (e.g., fish passage facilities, Homeland Security improvements, dam stabilizations) would justify RPS Program support, and most importantly how firm would the support be and in what form would it be made available. Hydro asks whether the support would be for a defined term of years unaltered by the Program goals being attained.

C. Discussion

We will adopt the following procedures pertaining to eligibility certification, selection and funding for maintenance resources.[23] A case-by-case approach to establish the financial viability of certain existing renewable resources is appropriate because of the difficulty in determining the specific financial conditions under which such facilities would be at risk. This approach allows for a review by Staff of those records and individual circumstances relevant to a facility's financial ability to continue operations.[24] This review should not be "onerous," but should include sufficient detail to assess actual need in considering expending RPS Program Main Tier dollars that

[23] We clarify the distinction between facility and resource vintage in a later section. Relevant here is the observation that we stated in the September 24 Order that only existing in-state hydro of five MW or smaller, wind, and direct-fired biomass resources are eligible for maintenance resource consideration. This proscriptive list excludes biomass co-firing facilities and, therefore, no criteria for determining the portion of biomass co-firing eligible as a maintenance resource need to be developed at this time.

[24] To assist in analyzing actual need, it is important that Staff have the ability to review the books and records of affiliates to ensure that improper allocation of costs/revenues has not contributed to the facility's poor financial condition.

would otherwise be used to encourage the development of additional renewable resources.

Regarding the comments on the establishment of thresholds and the need for clear, concise criteria to be applied when evaluating financial need, we restate from the September 24 Order that our concern pertains to those existing resources that may cease operation or be abandoned altogether under certain financial circumstances. The application of the case-by-case review, using the criteria proposed in the notice, will establish if the requesting facility is in a financial situation that puts it at risk of ceasing operation or being abandoned based on the specific circumstances of the facility. Regarding Hydro's concern about the types of improvements that would be eligible for RPS Program maintenance resource support, we point to the criterion that addresses the facility's ability to generate enough revenue to make necessary capital improvements.[25]

The purpose of the maintenance resource category is to avoid losing valuable baseline renewable resources, not eligible due to vintage, because they may be financially unable to continue operations without RPS Program support. Imposing more stringent environmental impact criteria on small hydros of five MW or less or direct combustion biomass facilities, than when they commenced operation, is antithetical to maintaining these resources. It is important to keep these facilities as part of a renewable portfolio to help achieve the targets of the RPS Program. Allowing NYSERDA, with Staff’s guidance, the flexibility to offer a price on a case-by-case basis may relieve small certified maintenance resource facilities from the requirements of participating in a general procurement. It also offers qualified resources the flexibility of accepting the offer or rejecting it to participate in general procurements.

These procedures support our declaration in the September 24 Order that providing for a case-by-case process for such facilities to seek financial assistance under the RPS Program balances the parties' competing concerns and our policy objectives by establishing a process enabling us to tailor any relief that might be provided so as to

[25] We also want to emphasize that the five MW limit on very small hydro facilities is applicable to the entire facility and not on a per unit basis.

ensure that: (1) the largest possible proportion of RPS Program funds are reserved for encouraging the development of additional renewable resources; and (2) that achievement of the overall target is not made more challenging due to the loss of existing resources from the baseline.

The procedures will be reviewed and analyzed as part of the 2009 review process discussed below. This review and analysis may result in the need for further technical conferences and recommendations for changes. Any recommendations for substantive changes to these procedures will be brought before us.

In addition to the nine criteria, considerations and methods proposed in the notice, we will add a tenth to support other State policy goals: we will also consider whether the facility has attempted to make use of other renewables programs available to it, such as Executive Order 111 and the voluntary green market.

Any entity seeking RPS Program maintenance resource eligibility for a facility must submit such a request to the OEE Director. The request should include the most recent three years' income statements, balance sheets, cash flow statements and income tax returns related to the facility. It should also include such items as type of facility; date of commercial operation; list of affiliates; list of contracts; and description of financing arrangements. The request may be submitted at any time through the duration of the RPS Program.

The OEE Director will review the information submitted and may request further information or clarification. The OEE Director will make a determination on the facility's eligibility for RPS Program maintenance resource status, taking into consideration each facility's circumstances based on the criteria proposed in the notice, and will notify the requesting entity of the findings. If a facility is determined to be RPS Program-eligible for all or a portion of its output, then the OEE Director will certify such facility to NYSERDA as a maintenance resource. Decisions regarding eligibility may be appealed to the Commission. Regarding the award of financial support to eligible projects, the OEE Director shall recommend to us, for our approval, a set payment award amount at the minimum level to assure project solvency, as well as other potential

measures that might be taken. Such awards of maintenance resource contracts may occur outside the Main Tier procurement cycle process.

To support the goal of maintaining baseline generation while making the greatest proportion of RPS Program funds available for encouraging the development of additional renewable resources, NYSERDA should excuse these facilities from performance during periods of the contract term in which they are able to participate in programs outside the RPS Program (i.e., Executive Order 111, voluntary green markets). This provision will apply to attribute sales outside of the RPS Program that are contracted for 12 months or longer. During such periods, NYSERDA will, of course, not pay RPS Program support. This initiative will provide opportunities for these resources to continue operating without a need to draw on RPS Program funds, which would then be available to support additional projects.

VII. PROCESS TO ESTABLISH ELIGIBILITY OF ADDITIONAL TECHNOLOGIES AND RESOURCES

A. Proposal

The notice proposed that the criteria for evaluating whether an additional or modified technology or resource should receive RPS Program support in either the Main Tier or the Customer-Sited Tier might include the origin and composition of the generation fuel, the nature of the process transforming that fuel into electricity, the totality of the environmental and other impacts of the generation process, such as air emissions and waste products, the degree of development of the technology, or resource and the probable cost of providing RPS Program support for that technology or resource. In the same manner that the Commission determined in the September 24 Order the technologies and resources currently eligible for RPS Program support either in the Main Tier or in the Customer-Sited Tier, the notice proposed that a decision to include additional or modified technologies or resources in either tier, or moving a technology or resource from the Main Tier to the Customer-Sited Tier, would also be made by the Commission upon submission of a petition or upon our own motion.

B. Comments

RETEC recommends use of a public participation process to address these issues. It also states that advocates of previously rejected technologies must show that the technology has changed sufficiently to overcome the reasons it was excluded. Delta suggests a broader approach. It argues that the procedure for adding additional eligible technologies should not be restricted to new technologies developed after the date of the September 24 Order, but should also include existing or established technologies that were not previously considered in the process leading up to the September 24 Order. Plug states that we have specifically designated three technologies for this tier; any addition to the tier should be subject to Commission approval after a process that includes public participation. It suggests that criteria for admitting new technologies should be based on the reasons for the formation of the Customer-Sited Tier. These include consideration of:

- the potential for widespread application;
- the potential for significant environmental and/or energy security benefits;
- whether the technology is technically mature; and
- whether the technology is capable of commercialization with incentives in the range needed by the three technologies that are presently included in the tier.

In evaluating other technologies for inclusion, Plug argues that consideration should also be given to the level of participation in the Customer-Sited Tier by the three technologies that have already been designated. If there are more applications than funds available, according to Plug, the Commission should not add more technologies without a compelling reason. In contrast, Delta argues that the procedure should be similar to the procedure adopted for allocating funds between the technologies that are currently eligible, so that new technologies that receive scores equal to, or better than, the current eligible technologies would be approved.

C. Discussion

A public process is appropriate for consideration of new technologies and resources for RPS Program support or for moving a technology or resource from the Main Tier to the Customer-Sited Tier. Parties seeking these types of modifications should seek appropriate relief from the Commission, in compliance with our filing requirements, which includes service on all parties listed on the official service list, as may be updated from time to time. The Commission's Secretary will have the discretion to extend the comment period provided for in the SAPA notice**,** offer an opportunity for reply comments**,** and/or to schedule a technical conference for the parties to discuss the petition.

We will not formally adopt the evaluation criteria suggested by Plug at this time, although these criteria may provide useful guidance. Parties filing petitions are urged to address as appropriate the: origin and composition of the generation fuel; extent to which the technology will result in new and incremental renewable resources; nature of the process transforming that fuel into electricity; totality of the environmental and other impacts of the generation process, such as air emissions and waste products; degree of development of the technology; and probable cost of providing RPS Program support for that technology.[26] We agree with Delta that technologies in existence before the September 24 Order, but not considered in that Order, should be eligible for RPS Program consideration.

After the opportunity for comments on the notice for any such petition expires, we will make a decision on the petition and issue an order that, if applicable, will modify the eligibility requirements outlined in the September 24 Order. In addition, we will require that eligibility matters also be addressed during the 2009 review, if such issues exist at that time.

[26] The various criteria may be more or less applicable depending on whether the petitioner is seeking Customer-Sited Tier status or Main Tier status for a particular technology.

VIII. MODIFICATIONS TO THE ENVIRONMENTAL DISCLOSURE PROGRAM

A. Proposal

In the September 24 Order, we directed Staff to: 1) identify any changes to the Environmental Disclosure Program (EDP) that may be necessary to accommodate implementation of the RPS Program; and 2) develop a mechanism ensuring the allocation and disclosure of renewable power related to the RPS Program surcharge to the retail customers paying the RPS Program surcharge. The EDP requires each load serving entity in New York to disclose to its customers the fuel mix and emissions rates for the generation sources it has used to meet its energy supply requirements. Staff acts as the Administrator of the EDP and is responsible for developing the company-wide disclosure label based on information provided to it by the NYISO, the Energy Information Association (EIA), and the New York State Department of Environmental Conservation (DEC). Each load serving entity is responsible for calculating specific customer labels by product type.

Retail electric service providers (i.e., load serving entities, including electric utilities, energy service companies, public authorities, municipal utilities, and electric cooperatives) in New York are provided with individual fuel mix and emissions characteristics of their generation portfolio to be disclosed to their customers. The EDP tracks all energy purchases made through the NYISO-administered spot markets (i.e., day-ahead and real-time), as well as through bilateral transactions. Renewable attributes may only be claimed by the purchaser of the energy. The NYISO provides Staff (as Administrator) with a report every six months stating the total amount of power each generating unit sold both in a six-month and in a twelve-month period, and the amount of power each individual retail electric service provider purchased from generating units during that period. EIA and DEC emissions data are obtained on an annual basis. The Administrator informs each generator and retail electric service provider of its total spot market sales or purchases for the latest available six-month period.

Under EDP, "conversion transactions" allow electric service providers to contract voluntarily with generators for the right to convert, for environmental disclosure purposes, blended NYISO spot market transactions into specific attribute-differentiated bilateral transactions. The energy and renewable attributes for which a conversion transaction is performed are transferred for environmental disclosure purposes from the generator to the load serving entity and are removed from the mix of resources in the NYISO spot market. Generators and load serving entities have approximately three weeks to report deals to convert their transactions and have those conversions recognized by the EDP Administrator through conversion transactions. Spot market participants are free to devise their own private methods for locating partners for conversion transactions, including but not limited to, the use of third-party intermediaries, brokers, and independent trading markets.

The Administrator reviews the details of the conversion transactions to ensure a match between reports from generators and reports from load serving entities and notifies the parties to the transactions of any inconsistencies to be resolved in advance of a final settlement of the environmental disclosure information. This review ensures there is no double counting of environmental attributes. After all of the conversion transactions have been accounted for, the fuel mix and emissions characteristics of the remaining spot market generation are re-calculated and assigned to electric service providers that have spot market energy remaining in their purchases.[27] The fuel mix and emissions characteristics are used to develop environment disclosure labels for the load serving entities, which then disclose customer-specific product labels showing each customer's purchases.

[27] The Administrator also incorporates any load modifiers provided by load serving entities, the generation emissions data from DEC, and the applicable fuel mix from the U.S. Department of Energy to create a company-wide disclosure label for load serving entities.

The notice proposed that we modify the EDP by:

a. authorizing the Administrator to allocate, for environmental disclosure purposes, RPS Program-eligible energy and associated emissions characteristics to each load serving entity, based on its proportion of commodity sales to customers from whom RPS Program charges are collected;
b. directing that load serving entities accurately disclose to their retail customers the fuel type and emissions characteristics of those customers' share of RPS Program-related energy based on their proportion of commodity sales to customers from whom RPS Program charges are collected;
c. requiring that RPS Program-related energy is disclosed to customers on a statewide basis as a percentage of total state energy requirements;
d. providing a tracking and accounting mechanism for purposes of determining the effectiveness of the RPS Program in meeting the renewable resource goal and for transactions of renewable energy across neighboring regions; and
e. providing for the collection of information regarding each load serving entity's customers' respective contribution to the RPS Program charge.

The September 24 Order deferred to the 2009 review discussion of a process to transition to a regionally compatible certificate accounting and verification system under the RPS Program. The notice proposed launching that discussion earlier, perhaps in 2005.

B. Comments

No comments addressed the specific EDP modifications that were proposed in the notice. Instead, commentators urged replacing EDP's current tracking and accounting mechanisms altogether. Constellation asserts that the development of a

regionally compatible attribute accounting and tracking system in New York would more easily allow it to procure renewable energy through power purchase agreements and sell attributes to NYSERDA or other entities throughout the region. Conservation and RETEC similarly argue for the development of a regionally compatible, attributes based accounting system. Both RETEC and Conservation share the position with Constellation that such a system should be developed now rather than wait for the 2009 review. Specifically, these parties recommend that we forego developing interim procedures to adapt EDP elements to the RPS Program and adopt an automated generation attribute accounting system similar to the system employed in New England and under development in PJM.

Conservation and Constellation urge the prompt initiation of a process to address development of a certificates-based accounting and tracking system. Such a system, they argue, is critical in determining the effectiveness of the RPS Program, accurately accounting for interstate transactions, and developing the voluntary green market. In their view, market liquidity would increase if we developed a versatile certificate-based system that is compatible with such systems in other parts of the country.

Conservation also states that, for similar reasons, parties should be able to obtain attributes in both physical and financial bilateral contracts. Under the current EDP framework, if energy is sold through a physical bilateral, the attributes of the energy can only be claimed by the purchaser of the energy. By "unbundling" the energy and attributes of the energy, Conservation and others insist, generators would be able to make the best possible long or short-term deals for each commodity. Not only would unbundling increase the number of participants in the attribute market, they claim, it would promote vigorous trading and would also encourage development of the voluntary green market. Constellation also argues that permitting third parties to buy renewable attributes from generators and sell them to NYSERDA would transfer the risk that a project will under perform from NYSERDA to those third parties. In addition, it claims that such market activity eliminates the need for central procurement solicitations, which

are an artificial intrusion in the natural development of the individual procurement renewable energy market.

C. Discussion

Although EDP may not provide some of the advantages sought by some of the parties, it does provide a workable platform for accommodating the necessary allocations and disclosures required to enable the RPS Program to proceed at this time,[28] and the allocation and disclosure issues we identified can be addressed quickly. For instance, NYSERDA and renewable generators are able to identify energy sold into the NYISO spot market under the RPS Program for the Administrator to ensure the energy and environmental attributes are properly credited toward the RPS Program and are not double-counted. We will therefore modify the existing EDP consistent with the proposals in the notice. The advantage of taking this action is that it should be fairly straightforward and not result in delay in implementing the RPS Program.

With these simple modifications, the Administrator will have the authority to assign the energy and attributes to each load serving entity based on their proportion of RPS Program charges paid, and they would be identified as RPS Program-related.[29] To effectuate this change, each of New York's six delivery companies are required to provide, to the Administrator of the EDP, a breakdown of the dollars it collected from load serving entities' customers served in its territory. The Administrator would then add up the contributions of the customers of each load serving entity in each of the delivery company's service areas where it operates and assign a percentage of renewable energy

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[28] In this regard, Community recently stated in a mailing to all of its New York customers that it is so pleased with our EDP that it has decided not to renew its certification with the voluntary Green-e program.

[29] For example, if a load serving entity's customers contributed 25% to the RPS Program charges, then the load serving entity's customers would be assigned 25% of the renewable energy procured under the RPS Program. This would ensure the allocation and disclosure of renewable power related to the RPS Program surcharge to the retail customers at the same percentage rates those customers are paying the RPS Program surcharge.

to each load serving entity at the same percentage of its customers' contributions to the total RPS Program. This would be a straight-forward calculation and would need the timely cooperation of all load serving entities to succeed, which we expect to occur.

To satisfy our responsibility to inform customers fully of the consequences of the RPS Program, we direct all load serving entities doing business in New York State to provide, to their retail customers who pay an RPS Program charge, environmental disclosure labels that accurately reflect on a "product" basis the fuel type and emissions characteristics of their pro-rata share of electricity related to the Main Tier, blended proportionately with the type of product they otherwise receive. In addition to enhancing the environmental disclosure labels, we also direct the electric investor-owned utilities to develop, in collaboration with NYSERDA, Staff, energy service companies, and interested parties, a statewide consumer education program to further inform customers of the RPS Program. This program should include an explanation of the: (1) modifications to the environmental disclosure label; (2) benefits of the RPS Program, as well as the billing and pricing impacts associated with renewable energy choices; and, (3) application of renewable technologies with respect to accessibility and reliability.

Staff should also consult with NYSERDA and the NYISO, as well as the parties, to explore whether New York would benefit from automating the EDP Program in a manner consistent with neighboring control areas to allow creation of renewable certificates as generation is recorded. The conversion transaction market could be made more liquid by developing an electronic tracking system for attributes that would make conversion transactions easier to trade. At this time, renewable generators and load serving entities still would be restricted to trading only those attributes that are associated with energy sold into or purchased out of the NYISO spot market.

In the September 24 Order we deferred consideration of the issue of "unbundling" attributes and power until the 2009 review because the issue was thought not to be critical until we move away from a central procurement approach. In view of the comments and our own observations of developments elsewhere, we now believe that we should initiate review of this issue earlier than 2009. While the commentators assert

that replacing EDP with a certificate trading and tracking program could lower the cost of the RPS Program, reduce seams between control areas, and provide a boost to the voluntary green market by making the renewable energy market more efficient, there is not yet enough evidence in the record to support such view. We would like to hear from all parties, including consumer advocates, about the benefits and drawbacks of such a decision.

Accordingly, we will direct Staff, in consultation with NYSERDA and the NYISO as well as the parties participating in this proceeding, to examine all aspects of the issue, and prepare a proposal by the fourth quarter of 2005 that we will issue for comment. Ideally, the design of such a system should: (a) facilitate communication/ tracking between control areas/power markets; (b) support compliance with current and future policy initiatives (e.g., the RPS Program, Regional Greenhouse Gas Initiative , and green power marketing); (c) provide cost-effective benefits to consumers; (d) ensure accurate and timely disclosure for consumer education; (e) support competitive markets in general and grow voluntary green power markets; and (f) have a high level of support from consumers.

IX. DESIGN OF ON-GOING MONITORING AND EVALUATION PROGRAM

A. Proposal

The September 24 Order directed that the RPS Program's administration be transparent, efficient, and verifiable, and that NYSERDA establish a monitoring and evaluation (M&E) program to help accomplish that directive. The M&E program proposed in the notice is similar to the evaluation model and framework used for the SBC program and would allow NYSERDA to use existing monitoring and evaluation contractors to ensure that RPS Program protocols and data are collected, analyzed, and reported consistent with and comparable to SBC program protocols and metrics. Using existing evaluation infrastructure avoids duplicative efforts and is efficient and cost effective. The notice suggested that consistent data gathering will be especially important for the Customer-Sited Tier.

The notice proposed that the M&E program include year-end reports, an expanded report in 2009, discussed below, and a final report in 2013 (the last year of the current procurement schedule). Consistent with the SBC program evaluation model and framework, reporting could include process evaluations (e.g., contract monitoring), measurement and verification (e.g., counting kWh and kW), and market assessments (e.g., success of green power marketers).

The notice also proposed other M&E activities, such as:

- analyzing the complementary role of future demand side management and energy efficiency initiatives to reduce statewide electric load, and the impact of reduced load on the amount of new renewable generation necessary to meet RPS Program goals and the amount of funding collected for the program;
- examining the interaction of the RPS Program with the Regional Greenhouse Gas Initiative as the latter is implemented and monitor how the RPS Program will improve New York's environment by reducing air emissions, including greenhouse gas emissions, and mitigating other adverse environmental impacts;
- measuring environmental and other impacts of the RPS Program on underserved communities;
- comparing the progress of New York's RPS Program with the progress of programs in other states;
- assessing program costs and benefits;
- assessing the development, implementation, and contributions of the Customer-Sited Tier to RPS Program goals;
- identifying macroeconomic benefits accruing to New York as a result of implementation of the RPS Program and improvements in New York's environment as a result of increased use of renewably generated power;

- exploring the extent to which the RPS Program has advanced renewable resource technologies and attracted jobs and renewable resource generators, manufacturers, and installers to New York State;
- measuring the contribution of voluntary efforts toward meeting RPS Program goals, to the extent that data are available;
- reporting and analyzing responses from stakeholders; and
- monitoring each procurement solicitation issued by NYSERDA, including the status of contracts, construction, and disbursement of funds.

B. Comments

IPPNY urges us to include in the list of M&E activities a requirement that NYSERDA consult with the NYISO and report on any adverse impacts of the RPS Program on competitive energy markets and system reliability. JU supports the recommendation that NYSERDA file annual year-end reports and an assessment of RPS Program costs and benefits.

MI states that M&E should be limited to evaluating the effectiveness of the program (cost, location of RPS Program resources) and not include tasks such as analyzing the role of future demand-side management initiatives or the interaction of the RPS Program with the Regional Greenhouse Gas Initiative, all of which would increase the cost of the RPS Program. MI urges us to adopt a budget for M&E activities and to place a cap on that budget.

RETEC expressed concern that while M&E must be conducted, annual reports need not be lengthy and burdensome on NYSERDA, Staff, and program participants. It comments that M&E should be scheduled at regular intervals during program implementation, primarily 2009 and 2013, but notes that such activities may need to be initiated earlier in order to be completed in time for scheduled reports in those years. RETEC agrees that using the existing evaluation infrastructure would avoid duplicative efforts and notes that the RPS Program is a different program than the SBC and care should be taken to ensure M&E is conducted in a manner appropriate to the RPS Program and its specific objectives. Although stating that the proposed M&E activities

appear comprehensive, but overly and unnecessarily ambitious, RETEC agrees that costs and benefits should be assessed when such benefits include impacts on public health, the environment, energy security, and energy diversity, including downward pressure on natural gas prices and supplies.

RETEC also expressed concern that evaluation of the addition of renewable resources must be seen within the context of what would have been added in the absence of those resources. It further agreed that measuring the voluntary sales component of the State's efforts to promote renewable energy is absolutely essential because, if the level of participation does not meet expectations, the mandatory incremental increase in renewable resources should be increased accordingly.

C. Discussion

We agree with MI and RETEC that several of the proposed M&E elements are not necessary, and instead should be addressed in the 2009 review effort. Accordingly, NYSERDA should design and implement an abbreviated M&E function that is nevertheless adequate to inform us, Staff, and other interested parties fully about progress in meeting program goals.

Current SBC evaluation contracts could be modified as necessary to provide a seamless incorporation of the RPS Program into existing M&E activities. Care should be taken to ensure that the M&E activities are cost-effective, appropriate for the RPS Program, and place only the burdens on NYSERDA, Staff and program participants that are necessary to fulfill the goals of the M&E program.

The annual M&E function should include year-end reports that address, for both the subject year and cumulatively:

- aggregated quantities of RPS Program energy generated and payments associated with the environmental attributes of that energy, for both the Main and Customer-Sited Tiers, with Customer-Sited Tier data based on calculations of assumed energy produced where necessary;
- progress to date in meeting the RPS Program's annual targets;

- the number of RPS Program solicitations issued, number of bids received, and quantities of environment attributes subject to RPS Program contracts and to pending contracts;
- the number of customer-sited installations authorized and quantities of environmental attributes associated with those installations; and
- such other financial and contractual data, as well as stakeholder feedback (including information obtained from the NYISO with respect to reliability), as may be appropriate to ensure full and accurate reporting to the Commission and the public.

We expect the year-end reports to be issued for information purposes by the end of the first quarter of the following year. They will be accessible through both the NYSERDA and DPS Web sites. The expanded report in 2009 is discussed below.

X. PROCESS AND ISSUES APPROPRIATE FOR THE 2009 REVIEW OF THE RPS PROGRAM

A. Proposal

In addition to developing the annual M&E program described above, the September 24 Order called for an expanded report in 2009 that would include issues identified in that order and additional issues requested by Staff and the Commission. The notice proposed a schedule and process whereby the 2009 program review could begin in the fourth quarter of 2008. This would allow adequate time for collection and analysis of much critical data from the first three calendar years of the RPS Program. The notice proposed that we direct NYSERDA, in cooperation with Staff, to prepare a report that would provide, at a minimum: (a) an overview of program achievements; (b) an assessment of success in achieving program goals and objectives; (c) program costs and benefits, including calculating cost/benefit ratios as appropriate; (d) any suggested modifications to the list of eligible resources; (e) the appropriateness of continuing the delivery requirement; (f) a proposal on how to transition to a more market-based system; and (g) any other recommendations to further improve the RPS Program.

B. Comments

Among the parties submitting comments, only RETEC mentioned the 2009 report, suggesting that many elements of M&E be addressed in 2009 rather than annually. In addition, it, along with several other commentators, urged that an evaluation of certificate tracking and trading options commence earlier than the 2009 review (the date established in the September 24 Order).

C. Discussion

As RETEC notes, most of the elements mentioned for inclusion in the 2009 report will be commenced early in the implementation process and will likely be addressed as part of on-going M&E reporting. The 2009 review will provide a timely forum to address the status of these important issues in more depth from the retrospective viewpoint of three years' of program experience. We expect the 2009 report to provide:

- an overview of program status;
- an assessment of the program's success in achieving program goals and objectives, including consideration of what renewable resources might have been added to the electric system with the RPS Program;
- the progress of New York's RPS Program as compared with the progress of programs in other states;
- an assessment of the impact on the RPS Program goals as a consequence of achievements in the voluntary green market;
- the complementary role of future demand side management and energy efficiency initiatives to reduce statewide electric load;
- the estimated impact of reduced load on the amount of new renewable generation necessary to meet RPS Program goals and the amount of funding required for the program;
- to the extent possible, an assessment of program costs and benefits, including identification of cost/benefit ratios as appropriate, impacts of renewable resources developed through the RPS Program on the

environment, energy security, economic development, and electric system reliability;

- macroeconomic benefits accruing to New York as a result of implementation of the RPS Program, including the extent to which the RPS Program has advanced renewable resource technologies and attracted jobs and renewable resource generators, manufacturers, and installers to New York State (the macroeconomic study conducted by NYSERDA in 2004 could be expanded to address these issues);
- the interaction of the RPS Program with the Regional Greenhouse Gas Initiative, as the latter is implemented;
- possible modifications to the list of eligible resources, if deemed appropriate;
- possible modifications to the delivery requirement, if deemed appropriate;
- steps for transitioning the RPS Program to a market-based system;[30]
- options for developing a regionally compatible certificate tracking and trading system;
- input from stakeholders; and
- additional recommendations for improving the RPS Program.

NYSERDA and Staff should release a draft of the report for public comment in the first quarter of 2009. A final report with specific recommendations should be submitted by Staff to the Commission for its review and action during the summer of 2009.[31]

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[30] We expect Staff and NYSERDA to schedule a workshop in the summer of 2005 to commence a discussion of matters associated with transitioning the RPS Program to a more market-based system, including an exploration of the best ways to encourage development of the voluntary market in the interim.

[31] We anticipate preparation of a similar report in 2013.

It is expected that presentation of recommendations for transitioning the RPS Program to a more market-based model will be the major new issue introduced in the 2009 review. Developing feasible recommendations must be based upon lessons learned implementing the RPS Program, as well as the analyses and assessments described above that will be conducted for the 2009 review.

XI. ADMINISTRATIVE, EVALUATION AND MONITORING COSTS

A. Proposal

The September 24 Order provides that NYSERDA would be compensated for actual, reasonable, and necessary administrative costs in fulfillment of its responsibilities as the administrator of the central procurement component of the RPS Program, and that we will determine the appropriate administrative fee. The notice proposed that we consider whether the fee should reflect such factors as: the cost of the design, development and implementation of the central procurement framework and related infrastructure, including the Customer-Sited Tier; costs of service for implementation of the central procurement component; and measurement, verification, monitoring, evaluation, and auditing requirements. The notice further proposed that the administrative fee should also include all expenses incurred for contractor assistance in design, development, data gathering, analysis, and compliance monitoring, to the extent that such costs are not already recovered under other programs administered by NYSERDA for which compensation is or has been provided. In addition, the notice proposed that we consider whether, in the proposed budget, NYSERDA should differentiate between personal and non-personal services costs of implementing NYSERDA's responsibilities in administering the RPS Program.

B. Comments

No comments addressed this issue.

C. Discussion

Staff and NYSERDA have developed projections of the reasonable and necessary costs associated with administering, monitoring, and evaluating the RPS

Program by estimating direct payroll, fringe benefits, indirect labor, overhead, other than personal service costs and consulting costs using its administration of SBC and other programs as guides. We will authorize annual expenditures for all three of these purposes in the aggregate of no greater than $3.2 million, on average, from 2006 through 2013. Over the course of the RPS Program these costs in the aggregate are projected to constitute less than four percent of the program funds.

Additionally, we have been advised of the possibility of an assessment on NYSERDA of state government costs pursuant to Public Authorities Law §2975. Accordingly, NYSERDA will be permitted to use RPS Program funds to satisfy any appropriate obligation that may arise thereunder, provided that any such annual expenditure is limited to no more than that amount attributable to the RPS Program as compared on a pro rata basis to all other NYSERDA programs, and that the total aggregate amount of such assessment shall not exceed $12,123,147 through and including 2013.[32]

NYSERDA will be entitled to compensation for its actual, reasonable and necessary costs incurred. NYSERDA will annually file with Staff a report on the administrative, monitoring, evaluation, and state government cost expenses incurred in that year. Such reports shall include categories for direct payroll, fringe benefits, indirect labor, overhead, other than personal service costs, consulting costs, and state government costs. Staff and NYSERDA will verify the actual costs and Staff will report to us any recommended changes to the allowed costs.

XII. FUEL-BASED VINTAGE

A. Clarification

AES and WPS raise an important issue in their comments regarding our vintage requirement which, Staff reports, was also discussed at the February 18, 2005 all-parties meeting. AES states that the proposed eligibility criteria for maintenance

[32] The dollar figure was provided by NYSERDA; it was derived by allocating its current annual PAL §2975 assessment on a pro rata basis across all of its programs.

resources, which require a showing of economic hardship, do not adequately consider how a biomass co-firing application should be evaluated. It explains that the owner of a financially viable co-firing biomass facility would evaluate the gross revenue margin for a megawatt produced by biomass versus the gross revenue margin realized by producing the megawatt with straight fossil fuel. AES argues that dependence exclusively on the proposed eligibility criteria for existing biomass co-firing facilities may prevent such a facility from becoming eligible for the RPS Program. Similarly, WPS states that the September 24 Order failed to address the eligibility of biomass fuel that could be burned in a pre-2003 facility.

The comments of AES and WPS, as well as lessons learned from the Fast-Track RFP, suggest that clarification is needed on whether existing facilities in service before January 1, 2003 (vintage requirement) that seek to use otherwise eligible fuel (e.g., biomass co-firing) are eligible for RPS Program support. As explained in the September 24 Order, the vintage requirement is designed to further the overall operational goal of the RPS Program, namely, the development of new renewable energy resources. To this end, Appendix B to the September 24 Order includes, in addition to a list of the RPS Program-eligible resources, a section entitled "General Requirements." The first requirement states, with regard to Main Tier resources, that "[t]o be eligible, a generation facility must first have commenced commercial operation on or after January 1, 2003."

Read literally, Appendix B makes compliance with this "generation facility" vintage requirement a condition of eligibility for all resources, whatever the category or source. This requirement furthers the underlying goal of incremental development where the production of energy is to be accomplished through an eligible technology or facility-based eligible resource. In such cases, the eligible resource is itself a "generation facility," and no incremental addition would result from RPS Program support of such facilities already in operation. However, when applied to biomass co-firing with existing fossil fuel, the vintage requirement would limit eligibility to those kilowatts generated at newly constructed facilities, e.g., a newly constructed coal plant.

This was not our intention; in such a case, the same incremental benefit will result regardless of the vintage of the generation facility.

Accordingly, we clarify that, where the eligible resource is fuel-based rather than facility-based, the vintage eligibility requirement applies to the incremental fuel stream and not to the generation facility by which it is converted to energy.[33] The age of the generation facility that will convert that fuel to energy should not be considered relevant to determination of eligibility in these cases. This clarification is consistent with the overall purposes of the RPS Program, namely, to increase the use of eligible renewable resources.

B. Measurement

As a general matter, it seems appropriate to determine incremental use of an eligible resource by the annual EDP data for as the years the resource was used at the facility, up to a maximum of five years, prior to January 1, 2003. The difference between this average and the higher proposed use would be the amount of the resource eligible for RPS Program support. We appreciate the complexity of biomass issues, however, and are not prepared to make a final decision on the measurement protocol. Instead, we expect Staff and NYSERDA to hold a technical conference before the end of the second quarter of 2005 to explore issues associated with biomass. One possible approach, on which we seek comment, is as follows:

- A co-firing project must be able to account physically for the heat input into the generation device. Existing facilities, regardless of current fuel resource, will be required to submit documentation regarding past

[33] Fuel-based eligible resources include biogas, biomass, and liquid biofuel. The facility-based eligible resources include fuel cells, hydroelectric, solar, tidal, and wind. We are not modifying our determination in the September 24 Order that electricity generated from waste-to-energy facilities shall only be considered eligible if derived from fuels identified as eligible biomass, which must be source-separated and separately converted to energy. Therefore, an eligible facility must demonstrate that the eligible biomass fuel would be fired in a separate boiler or if in the same waste-to-energy boiler the fuel must solely be eligible biomass.

generation. This data can be used to calculate a baseline; heat input in excess of the baseline figure would be eligible for RPS Program funding support. Co-firing projects (using solid or gaseous fuels) would be required to provide an accounting of the heat input provided by the renewable resource to the energy conversion system. Such accounting would include physical measurements associated with that fuel's heat and mass flows, and regularly monitoring and testing will be required to ensure continuing accuracy.

- In a pipeline using a mixed gas (landfill gas plus natural gas) stream, every user downstream of the mixing is presumably receiving a pro rata share of landfill and natural gas. Therefore, any existing generator downstream of the mixing is effectively operating as a co-firing project. These projects would be subject to the fuel accounting protocols proposed for other types of co-firing projects, which include reasonable physical measurement of the heat input provided by the renewable resource in the incoming fuel stream.

Staff and NYSERDA should prepare a report for public comment in the third quarter of 2005 and Staff should submit recommendations to us on these issues prior to the next procurement solicitation.

XIII. BIOMASS CRITERIA

A. Forest Management Plan and Harvest Plan Issues

1. Proposal

Regarding certification of certain biomass facilities, the notice sought comments on whether a distinction should be made between a forest management plan and a harvest plan for the procurement of eligible sources of harvested wood and silvicultural waste wood. A forest management plan would be developed by the biomass facility forester and would address overall management goals and performance standards for procuring the biomass resource. A supplier for a particular biomass facility would be

expected to be in compliance with the facility's specific forest management plan (and have a copy of that plan).

The notice proposed that, separate and discrete from a forest management plan, a harvest plan would be required for each supplier's harvesting operations. The notice proposed the following management goals to guide the development of individual harvest plans:

- landowner objectives and available alternatives;
- site characteristics, timber stand condition in regards to age, vigor, species mix, and past harvest history; and
- impact on the ecology of the site, including water quality, wildlife, aesthetics, and recreational uses.

The notice also proposed appropriate components of a harvest plan:

- a map, including the area to be harvested, topography, skid road layout, location of all streams, wetlands and water bodies, and forest type designation;
- harvest objective (e.g., long-term timber management, land conversion);
- types of harvest (e.g., integrated harvest, fuel wood only);
- description of silvicultural technique(s) to be implemented;
- anticipated volume of wood to be harvested; and
- best management practices to be implemented.

The notice further proposed that we consider whether, in order to satisfy these requirements, we should require the biomass facility forester to meet with Staff, DEC personnel, or a qualified private consultant hired by the State at least once a year to conduct on-site inspections during active harvesting operations or recently completed operations.

2. Comments

RETEC supports the proposal pertaining to the requirements of forest management and harvesting plans for eligible resources. IPPNY advises that requiring a

separate plan for each supplier's harvesting operation would be time consuming because biomass facilities usually harvest resources from many small lots. IPPNY recommends, therefore, that we should not require harvest plans for lots less than a harvested area of 25 acres. In addition, IPPNY asserts that lots being managed by another forest management group should be exempt from this requirement. In these cases, it continues, we should only require facilities to document, for each applicable tract of land, the owner, the forest manager, the location, and any other pertinent information regarding the harvest. IPPNY also suggests that any fuel derived from forestland clearing for rights-of-way and development should be exempt from the harvest plan requirement.

3. Discussion

We agree that suppliers must be in compliance with a facility's forest management plan but need not have one themselves. Instead, suppliers must prepare only a harvest plan.[34] NYSERDA is developing a "Guide for Biomass Project Developers for Participation in the RPS Program," which will contain the final list of approved guidelines to be included in the forest management plan as a required minimum for standards that will be followed to meet the stated criteria of the RPS Program.[35] As part of the development of this guide, templates or model plans for overall forest management and for individual harvests will also be prepared and incorporated in the guide. The templates will lay out the required content in the forest management plans so that biomass developers understand the requirements imposed. The templates will also include criteria and standards for the RPS Program, the guidelines that need to be followed, commitment to complete harvest plans, required content of the harvest plans, commitment to monitor and report on harvest operations by a professional forester, and

[34] Appendix B, attached, is modified accordingly.

[35] These guidelines and criteria will prescribe acceptable forest management and fuel harvesting practices that must be adhered to by developers to ensure eligibility under the RPS Program. The guidelines and criteria should be published and available to prospective developers in advance of the next procurement effort by NYSERDA. Certification will be dependent on the facility forest management and fuel harvesting plans complying with the published criteria and guidelines.

agreement on regular inspections of the harvesting sites. As further guidance, the harvesting plan template will be included as part of the forest management model plan. It is envisioned that the harvesting plan template will be a standard form completed by each of the suppliers for each of their harvesting operations.

We will authorize use of either a State authority or the non-governmental certification process; project sponsors would not be required to be involved in both processes. There are currently three main non-governmental certification systems in place for this region, including those maintained by the Forest Stewardship Council, the Sustainable Forestry Initiative, and Tree Farm. All three of these systems have a mechanism for third party certification and periodic re-inspections and many of the principles, standards and criteria that guide the assessment process are similar among the systems. Certification under any of the three systems will be accepted for the RPS Program.

We disagree with IPPNY that harvesting plans should not be required for lots smaller than 25 acres. The September 24 Order required preparation of a forest management plan for all suppliers of harvested wood and silvicultural waste wood; we have eased that obligation considerably by now requiring only a harvesting plan from suppliers. However, because there may be special circumstances where requiring a harvest plan for a small parcel may be unduly burdensome, we will allow suppliers to seek a waiver from this obligation by submitting such a request to the OEE Director, who will issue a determination within 60 days of the submission. This decision may be appealed to the Commission. We also reject IPPNY's request to exempt harvesting plans for lots managed by other forest management groups because they may not require the same goals of the RPS Program and the harvesting plan requirements addressed above are not overly burdensome. Finally, IPPNY's statement to exempt forest land clearing for rights-of-way and development from the harvest plan requirement is consistent with the September 24 Order, which does not require forest management or harvesting plans for site conversion waste wood.

B. Adulterated Biomass

1. Proposal

In its comments on the proposed Implementation Plan, Taylor urges the Commission to add to the definition of eligible biomass in Appendix B of the September 24 Order, the category of "adulterated biomass" to the description of "Urban Wood Waste," which it defines as including economically unrecyclable paper, paperboard, textiles, food, leather, yard waste and leaves. Appendix B currently describes this category as:

> The source-separated, combustible untreated and uncontaminated wood portion of municipal solid waste or construction and demolition debris. Adulterated forms of wood, such as plywood and particle board, may be used as a feedstock for biogas or liquid biofuel conversion technologies if it can be demonstrated that the technology employed would produce power with emissions comparable to that of biogas or liquid biofuel using only unadulterated sources as feedstock.

Taylor explains that it is not seeking to use adulterated biomass as a feedstock for biomass combustion or partial-combustion conversion technologies. Rather, it is requesting authorization to use a broader range of adulterated biomass or mix of adulterated biomass materials, in addition to adulterated wood, as a feedstock for biogas or liquid biofuels conversion technologies only if it can be demonstrated that the technology employed would produce power with emissions comparable to that of biogas or liquid biofuels using only unadulterated sources as feedstock.

This issue was separately noticed for public comment in the State Register on February 2, 2005. National Resources Defense Council, Pace Energy Project, Clearwater, Renewable Energy Long Island, and Environmental Advocates of New York (collectively, Environmental Commenters) filed comments and Taylor filed responsive comments.

2. Comments

Environmental Commenters state that the Taylor proposal has the potential to create environmental benefits, but it recommends that we require specific information about facility performance and should also condition approval on on-going monitoring

and verification of Taylor's claims rather than making a broad change in the definition of RPS-eligible biomass. Environmental Commenters are concerned that we would replace its definition of biomass with a vague and open-ended alternative that cannot be monitored or enforced based on promises from a project that never develops. They, therefore, makes four recommendations:

a. The definition of RPS Program-eligible "adulterated biomass" that can be used for gasification must be more specifically defined and limited to particular materials rather than the open-ended definition of "non-wood renewables."

b. The Commission should require Taylor to submit information on expected emissions rates for mercury, dioxins, and furans, as well as verification for the emission rates for other pollutants discussed in its petitions.

c. Adulterated biomass must be either source-separated or, if derived from mixed waste, processed in an DEC-permitted solid waste facility to separate any and all non-biomass non-combustible materials as needed to maintain emissions comparable to those using unadulterated biomass in a given biogas or liquid biofuel facility.

d. Monitoring provisions should be developed to ensure that Taylor would in fact be required to cull out and recycle any materials, including paper that are recyclable and to only process for fuel the materials that cannot be recycled.

Noting the pollution emitted by landfills, Taylor responds by stating that it agrees with several of suggestions of the Environmental Commentators but disagrees with others. In particular, it challenges the claim that every care should be taken to promote paper recycling because of the critically damaged state of world and national forests, and that, therefore, the term "unrecyclable" with respect to paper and paperboard must be specifically limited and defined. Taylor asserts that the logical extension of this argument would be to prohibit use of unadulterated wood from any non-certified

sustainable forest source and disqualify as ineligible any landfill that does not recover paper from the post-collection waste stream above 50 percent.

Taylor rejects the recommendation that the Commission should require numeric maximum emissions rates. Instead, it argues that the better approach is to build a DEC-permitted facility and then operate the plant on unadulterated wood to develop a baseline emissions level. Then, with DEC concurrence, adulterated biomass materials could be introduced and the emissions would be monitored to ensure that no significant change resulted. Taylor suggests that the Environmental Commentators would be able to address their specific concerns during the permitting and testing process.

The company states that other than the words in parenthesis, it agrees with the following statement of Environmental Commentators:

> Any form of adulterated biomass or mix of adulterated biomass materials may be used as a feedstock for biogas or liquid biofuels conversion technologies only if it can be demonstrated that the technology employed (from feedstock separation through to power generation) would produce power with emissions comparable to that of power generated from biogas or liquid biofuels using only unadulterated sources of feedstock.

It also agrees with Environmental Commentators that: 1) adulterated biomass derived from mixed wastes must be processed in a DEC-permitted solid waste facility; 2) non-biomass, non-combustible materials must be separated as needed to maintain comparable emissions comparable to unadulterated wood; and 3) adulterated biomass may not be used in biomass combustion plants. Taylor suggests as a variation of the proposal of the Environmental Commentators a requirement that:

> [t]he biogas or liquid biofuels facility utilizing adulterated biomass must demonstrate that all feedstocks that are not source separated in fact come from NYSDEC-permitted solid waste facilities that pay for NYSDEC-provided monitors to ensure that their biomass processing is consistently within their facility permits and conditions.

Taylor argues that this approach parallels the approach we have taken with regard to harvest resources. Finally, the company rejects the assertion that we should take on the

role of DEC by developing monitoring provisions to ensure that it would cull out all recyclable materials.

3. Discussion

While we support the expansion of the existing definition of biomass to accommodate the type of technologies discussed by Taylor, we agree with Environmental Commentators that we should proceed with care. We will amend the current language on urban wood waste in Appendix B as follows:

> Urban Wood And Related Waste
>
> The source-separated, combustible untreated and uncontaminated wood portion of municipal solid waste or construction and demolition debris. Adulterated forms of biomass such as nonrecyclable wood (e.g. plywood and particle board), paper, paperboard boxes, textiles, food, leather, yard waste and leaves may be used as a feedstock for biogas or liquid biofuel conversion technologies, if it can be demonstrated that the technology employed would produce power with emissions less than or equal to emissions produced while using only unadulterated feedstock.

We will also include in the "Other Requirements" section of Appendix B the requirement regarding feedstock suggested by Taylor.[36]

We are, however, supportive of many of the arguments advanced by Environmental Commentators and, therefore, we request Staff and NYSERDA to include this topic in the technical conference on biomass issues discussed above, and provide recommendations to us prior to the next solicitation. Staff should elicit the expertise of DEC and NYSERDA, and consult with the parties as appropriate, in designing protocols to verify emissions and to monitor feedstock supply.

XIII. PHASE 2 RELIABILITY REPORT

As noted in the September 24 Order, maintaining a reliable electric system while integrating significant amounts of non-traditional generation into the grid is a core concern. The New York electric system has historically been able to accommodate small wind farms that are scattered throughout the State. Meeting the goals of the RPS

[36] An amended Appendix B is attached.

Program, however, requires the installation of very large wind farms (200-500 MW) in concentrated areas. Accordingly, in the September 24 Order, we asked Staff to report on this issue and make recommendations to protect system reliability.

In the last quarter of 2003, NYSERDA and the NYISO retained General Electric International, Inc. (General Electric) to study the possible specific planning and operation impacts on the New York bulk electric transmission system resulting from the addition of new, large-scale wind generation. General Electric produced two reports. The Phase 1 Report was completed in early 2004. This initial report: 1) reviewed the world experience with wind generation; 2) reviewed planning and operating practices and reliability criteria that relate to wind generation; and, 3) provided a screening level assessment of the impact of the integration of large-scale wind generation on bulk electric system reliability.

A. Summary of the Phase 2 Report and Key Findings

The Phase 2 Report, issued in March 2005, builds upon the findings of the Phase 1 Report. The analysis focuses on the addition of 3300 MW of new wind generation, which is approximately 10% of the peak New York State load. The report evaluates the addition of this new generation from the perspective of reliability issues such as capacity, forecast accuracy, load following, regulation and stability performance.

The base case scenario for the study added 3300 MW of new wind generation to the system, most of which is modeled in the west and north-central portions of the State. Only 365 MW are modeled in the Hudson Valley area and 600 MW of off-shore wind generation is located near Long Island. The wind machine design modeled in the study represents state-of-the-art technology that includes attributes important to system reliability: continuously controllable reactive power capability (+/- .95 power factor at the point of interconnection), voltage regulation, and low-voltage ride-through.

The Phase 2 Report concludes generally that the impact on the bulk electric system from integrating 3300 MW of wind generation will require only minor adjustments to existing planning, operation and reliability practices. Specifically, it reached the following eight conclusions:

- The requirements and standards of the NYISO's System Reliability Impact Study, which assesses a new facility's interconnection to the electric system, do not need to be changed for evaluation of new wind resources.
- Planning studies should consider the outage of an entire wind farm connected to a common interconnection bus as a single-element contingency, as opposed to the current practice for synchronous plants to consider the loss of one unit to be a single-element contingency. The Phase 2 Report did not find the loss of multiple wind farms due to the loss of wind to be a credible event.
- Wind farm interconnection requirements should include:
    - voltage regulation with a power factor range of +/- .95;
    - low-voltage ride-through of 15% for 625 milliseconds;
    - monitoring, metering and event recording capability; and
    - power curtailment capability.
- Interconnection requirements such as governor control and power system stabilizers are either technically impractical at this time or inappropriate for wind generators and should not be included in interconnection studies and requirements.
- It is anticipated that, in the future, it will be possible to incorporate in new units set power ramp rates, apply governor and reserve functions and to achieve zero-power voltage regulation. As these capabilities develop, they should be considered in interconnection studies as required to maintain system reliability.
- While the addition of wind increases the peak hourly system ramp rate level by 7% (from 2575 MW to 2756 MW per hour), and the load following requirements by 3%, pre-existing NYISO practices and available swing generation should be able to accommodate the increases.

- To maintain current levels of regulation, on-line regulation resources would have to increase by 17% (up to a 47 MW increase, depending on the season).
- Spinning reserve requirements would not be affected.

These conclusions are subject to the following conditions: the System Reliability Impact Study interconnection process will be required for individual wind farms; installed wind farm ratings do not exceed the capacity of local transmission facilities and farms are subject to local constraints; and wind farm design is state-of-the-art technology as modeled in the base case.

B. Comments

NYSERDA sponsored two forums in the interval between release of the draft and the final Phase 2 Report to present the results and receive feedback. In addition, written comments were invited. Staff attended both forums and has reviewed the written comments. Staff reports that it found that the Phase 2 Report authors were generally responsive to comments, incorporating suggestions that were consistent with system reliability principles and within the scope of the study. Staff likewise considered the industry comments in formulating its analysis of the Phase 2 Report.

C. Staff Analysis

Staff reports that it is in fundamental agreement with the Phase 2 Report conclusion that a total of 3300 MW of new wind generation can be integrated on the New York electric grid in a manner that maintains the reliability of the bulk transmission system with only minor changes to existing planning, operation and reliability practices. Staff advises, however, that this conclusion comes with significant qualifications that cannot be overlooked.

First, the results of the Phase 2 Report only apply to the NYISO operation and planning of the ***bulk*** transmission system. There may be local operation and site-specific considerations that need to be incorporated into individual interconnection studies that could result in a modified wind farm design.

Second, the Phase 2 Report incorporates assumptions regarding where wind farms are likely to develop. If more wind capacity is located in a particular area or if the interconnection points shift, the bulk transmission system impacts are likely to change. The NYISO needs to monitor development to ensure study conclusions remain valid.

Third, the Phase 2 Report assumes that new wind farms will be designed using state-of-the-art technology and that the facilities will be maintained and not allowed to degrade.

Finally, a base assumption is that the individual wind farms will go through the System Reliability Impact Study process and will be able to meet all standards, policies and criteria embodied in the process that any other generator would have to meet. As the study goal was to identify system-wide impacts, siting-specific considerations were not addressed in the study.

1. Interconnection Requirements

The Phase 2 Report supports interconnection requirements of: 1) voltage regulation with a power factor range of +/- .95; 2) low-voltage ride-through of 15% for 625 milliseconds; 3) monitoring, metering and event recording capability; and 4) power curtailment capability. Staff reports that it supports these requirements. Staff suggests, however, that there should be some flexibility built into the NYISO process regarding the 15% requirement. Staff explains that the results of a site-specific interconnection study could indicate that a 30% requirement would be sufficient for a particular wind farm. Or, in the alternative, the interconnection study could indicate that 15% would be insufficient to prevent two generation resources from tripping off-line in the event of a 3-phase fault. A process should be developed by the NYISO to grant a waiver of the 15% requirement in the first case. To address the second case, the developer should have the opportunity to: 1) redesign the wind farm; 2) redesign the interconnection; and/or 3) request the affected transmission owner and the NYISO to investigate whether an operating procedure can be designed to compensate for the problem, with the wind farm having cost responsibility for the procedure consistent with existing interconnection requirements.

The Phase 2 Report concludes that the outage of a wind farm is a legitimate contingency but concludes that the loss of multiple wind farms due to the loss of wind is not a credible event. Staff believes this conclusion is overly general. If two farms are dependent on the same wind stream, a loss of wind would affect both farms. This situation is similar to hydro plants on the same river system; if there is a drought that limits water flow, all plants will be impacted. The determination as to whether simultaneous loss of energy output from more than one wind farm is appropriate to include in an interconnection study should be made on a case-by-case basis.

The Phase 2 Report notes that the current state-of-the-art technology does not provide for some functions that are found on synchronous generators. Site-specific interconnection studies might identify system conditions that the wind farm design is not capable of mitigating. This could include the presence of sub-synchronous resonance and insufficient local generation to adjust for wind farm ramp rates. While Staff expects the transmission owner and the NYISO to work with the developer to identify mitigation measures, it is possible that the solutions do not yet exist or the cost to the developer would be prohibitive. In these instances, it may not be possible to interconnect the wind farm.

2. System-Wide Cost Impacts

The Phase 2 Report states that the system ramp rate level will increase by 7%, load-following requirements will increase by 3%, and the on-line regulation resources would have to increase by 17% to maintain current levels of regulation. These increases, while not quantified in the Phase 2 Report, will translate into real system cost increases. The Phase 2 Report also observes that only about 10% of wind farm capability can be counted towards Unforced Capacity calculations. However, the energy produced from wind farms equals about 30% of capacity. If this new energy interjected into the market results in some synchronous generation being forced off the system, the State would be left with less flexible generation (i.e., wind units replacing synchronous machines) and lower amounts of installed generating capacity available to meet the installed reserve margin requirements.

The Phase 2 Report argues that imbalance penalties should be eliminated for wind as it is largely non-dispatchable. Therefore, new forecasting and dispatching practices must be developed due to the unique characteristics of wind. In particular, the report recommends using centralized forecasting rather than individual forecasts. We agree with Staff that these issues would be best addressed through the NYISO stakeholder process. In addition, several commentators indicated dissatisfaction with the level of economic analysis provided in the Phase 2 Report relating to the cost impacts on existing non-wind generation and on impacts to system operation costs including allocation of increased costs. While these are topics that have been briefly discussed within the Phase 2 Report, the level of requested additional study and discussion was beyond the specified scope of study for Phase 2. These topics, however, are important and deserve further attention; the NYISO stakeholder process is appropriate for this issue as well.

XIV. CONCLUSION

The Implementation Plan provides balanced and fair rules and guidelines that we expect will encourage wide participation in the RPS Program. The clarifications and modifications discussed above, as well as recommendations resulting from future technical conferences, should also eliminate barriers to participation.

The Commission orders:

1. The Implementation Plan in Appendix A is approved and shall be administered in accordance with the discussion in the body of this Order.

2. The criteria, procedures, and process for Main Tier and Customer-Sited Tier, including**,** but not limited to, consequences for noncompliance, procurement and pricing methodologies, and criteria and procedures for eligibility determinations are established in accordance with the discussion in the body of this Order.

3. The Director of the Office of Electricity and the Environment is designated, in accordance with the standards stated in the body of this Order and the

Implementation Plan, to issue advisory opinions and make determinations regarding facility eligibility ; waive, in specific instances, the general requirement that eligibility for Customer-Sited Tier support is conditioned upon a contribution to the RPS Program**;** recommend projects for receipt of Main Tier contract awards; and waive the harvesting plan obligation.

4. The Environmental Disclosure Program is modified to authorize the EDP Administrator to allocate administratively, for environmental disclosure purposes, the "spot market" power related to the renewable resource generation output receiving price premiums in the RPS Program Main Tier, to the load serving entities, in proportion to their respective fulfilled obligations under the RPS Program.

5. Central Hudson Gas and Electric Corporation, Con Edison Company of New York, Inc, Niagara Mohawk Power Corporation, New York State Electric & Gas, Rochester Gas & Electric Corporation, Orange & Rockland Utilities, Inc. and all of the energy service companies doing business in New York State shall provide to their retail customers paying an RPS charge environmental disclosure labels that accurately reflect, on a "product" basis, the fuel type and emissions characteristics of their pro-rata share of electricity related to the RPS Program Main Tier, blended proportionately with the type of product they otherwise receive; and, the state's investor-owned utilities shall develop, in collaboration with Staff, energy servicing companies, NYSERDA and interested parties, a state-wide consumer education program to further inform customers of the RPS Program in accordance with the discussion in the body of this Order.

6. The vintage requirement is clarified and the definitions of harvested wood, silvicultural waste wood, and urban waste wood are modified as discussed in the body of the Order.

7. NYSERDA shall be compensated for its actual reasonable and necessary administrative, monitoring and evaluation costs up to $3.2 million per year on average between 2006 and 2013, in fulfillment of its responsibilities as administrator of the central procurement component of the RPS Program, and for appropriate state

government costs of no more than $12,123,147 that may be assessed pursuant to Public Authority Law §2975.

8. This proceeding is continued.

By the Commission,

(SIGNED) JACLYN A. BRILLING
Secretary

RPS Program Implementation Plan

This Implementation Plan addresses matters pertinent to the Retail Renewable Portfolio Standard (RPS) Program the New York State Public Service Commission (Commission) adopted in its Order Regarding Retail Renewable Portfolio Standard, issued on September 24, 2004 in Case 03-E-0188 (September 24 Order). In the September 24 Order, the Commission adopted a policy designed to increase the percentage of renewable energy used by New York consumers from the current figure of approximately 19 percent to at least 25 percent by 2013. The RPS Program component of the renewable energy policy is designed to achieve a renewable energy percentage of 24 percent. The Commission expects that the voluntary green power market will contribute at least 1 percent to the overall 25 percent goal.

Key elements of the RPS Program decided by the Commission in the September 24 Order include determinations of resource eligibility, identification of the funding source, and designation of the New York State Energy Research and Development Authority (NYSERDA) as the central administrator of an incentive-based procurement program. The September 24 Order also requested preparation of an Implementation Plan that addresses in more detail the various elements of the RPS Program. This document complies with that request by identifying the processes and approaches that the Department of Public Service (DPS) Staff and NYSERDA Staff propose to implement the Commission's RPS Program. In most cases, this document proposes specific administrative protocols, but with regard to resolution of several issues, the document proposes meetings with the parties and further analyses.

The State Administrative Procedure Act (SAPA) notice with respect to issues associated with development of the Implementation Plan was published on November 10, 2004.[1] Responsive comments were submitted by 16 parties, and the

[1] SAPA No. 03-E-0188SA2.

concerns and recommendations of the parties have been incorporated into this Plan to the extent practicable and appropriate.[2]

The September 24 Order specified that the Implementation Plan should address, at a minimum, the following matters: the establishment of a central procurement program (which would include the establishment of a certification procedure to determine facility eligibility, the types of procurement models that might be employed, processes for implementation of the customer-sited tier, and the projected costs for administering the program); how and when technologies that are not currently eligible for RPS Program support might be deemed eligible (including development of criteria to evaluate demonstrations of financial need that existing hydroelectric facilities of five megawatts or less, existing direct combustion biomass facilities, and existing wind facilities must provide in requesting such eligibility); what approaches will be used for monitoring and evaluation of the program, including the process for a 2009 Commission review (which must address, among other matters, program costs and benefits, any needed modifications to the list of eligible resources, the appropriateness of continuing the delivery requirement, and a proposal on how to transition to a more market-based system); what, if any, changes to the existing environmental disclosure program will be made; and development of a mechanism to allocate the RPS Program environmental attributes to the customers paying the RPS Program surcharge, as well as a mechanism for informing those customers of their allocations of such attributes. These matters are presented below.

Stakeholder Workshops

To maximize the efficiency of the RPS Program and to leverage the expertise and experience that is available from the stakeholders, DPS Staff and NYSERDA Staff will conduct a series of concentrated, focused stakeholder workshops on defined topics that figure prominently in the design of the RPS Program. These topics include, but are not limited to, pricing options, how to best design the RPS Program to facilitate the eventual conversion to a competitive model, how best to structure New

[2] A "Fast-Track" procurement under the RPS Program was authorized by the Commission on December 16, 2004, and NYSERDA conducted its initial solicitation pursuant to that authorization. This Implementation Plan addresses elements of the RPS Program from this date forward.

York's RPS Program incentives in light of the status, structure, and requirements of regional renewables programs, and the preparation of more focused guidelines and eligibility criteria for biomass resources. DPS Staff and NYSERDA Staff will organize and conduct these stakeholder workshops as appropriate, beginning in the second quarter of 2005.

Certification Procedures for Main Tier Resources

Summary

Advisory Opinions regarding the eligibility of a project or resource under the RPS Program will be available by application to NYSERDA. Provisional Certification of the eligibility of each proposal submitted in response to a solicitation will be required prior to the entry of a contract. Operational Certification will be required prior to the payment of any funds under an RPS Program contract.

a. Advisory Opinions

Advisory Opinions with regard to eligibility of projects or resources for participation in the RPS Program may be requested by potential proposers at any time. Requests for Advisory Opinions must be submitted to NYSERDA with sufficient data and information to allow a full evaluation. Guidelines describing the format of such applications and the information that will be required will be developed and made available. NYSERDA may request additional information during the consideration of an application. Once an application is deemed complete, NYSERDA Staff will prepare an analysis and forward it to the Director of the Office of Electricity and Environment of the Department of Public Service (OEE Director) for review and the preparation of an Advisory Opinion. The OEE Director will thereafter provide the Advisory Opinion to the requesting parties and NYSERDA within 30 days of the date on which the application was deemed complete. Advisory Opinions will not constitute or substitute for Provisional Certification.

b. Provisional Certification[3]

Provisional Certification of proposals will be required prior to the awarding of contracts for those proposals. Depending on the procurement model to be

[3] Note that all determinations by either NYSERDA or the OEE Director discussed in this document are appealable to the Commission.

employed, Provisional Certification may be required prior to considerations of proposals. In either case, Provisional Certification affirms that the project, if constructed and operated as described in the proposal submittal, will meet the Commission's RPS Program eligibility criteria. The rules of each solicitation will require proposers to submit to NYSERDA sufficient data and information regarding each proposed facility and fuel characteristics, as appropriate to the resource, in sufficient detail to enable a full evaluation and a determination regarding Provisional Certification. Additional information may be requested as NYSERDA Staff deems appropriate. After analyzing the submissions in accordance with the provisions for the solicitation, NYSERDA Staff will forward the results of its analyses to the OEE Director, who will make a determination regarding Provisional Certification.

c. Operational Certification

Operational Certification will be required before any payment will be made by NYSERDA under an RPS Program contract. At such time as a facility is ready to begin performance under an RPS Program contract, NYSERDA will require of the contracting party sufficient information to allow a determination of whether that facility has been constructed and will operate in conformity with the Proposal upon which Provisional Certification was granted. NYSERDA Staff will perform such investigations, which may include document audits and/or site visits, as is appropriate under the circumstances. NYSERDA Staff will prepare an analysis of the facts and circumstances as they appear, which shall be forwarded, along with such other documentation as has been prepared or collected, to the OEE Director, who will make a determination regarding Operational Certification. The OEE Director will, if practicable, inform the contracting party and NYSERDA as to whether Operational Certification has been granted or denied, within 30 days of the commencement of the review. If Operational Certification is denied, the contracting party will be advised of the basis for the denial and may submit a subsequent request for Operational Certification once the identified problems are corrected.

NYSERDA will remain entitled, for the duration of RPS Program contracts, to seek such information from contracting parties and to perform such investigations as may be required to allow confirmation that the facilities continue to operate in accordance with their Certifications. Such investigations may be commenced

at NYSERDA's discretion or upon the request of the OEE Director. The results of all such investigations shall be forwarded to the OEE Director.

Main Tier Procurement Models and Procedures

1. Procurement Timeframes

The energy targets for procuring new renewable supplies begin in 2006 and steadily increase through 2013. Multiple procurement cycles are expected. Procurement quantities for individual solicitations will be determined based on quantities placed under contract in preceding procurement cycles and other factors. As each successive solicitation provides information from the market and feedback on the solicitation process, procurement procedures and methods may also be modified to enhance the effectiveness in meeting the overall RPS Program goals.

2. Solicitations

On an annual basis, DPS Staff and NYSERDA Staff, will report on RPS Program progress and the attainment of the targets set forth in the September 24 Order. As progress toward attainment of the Commission's targets is monitored, solicitations will be proposed.

Through at least the next two procurements, DPS Staff will ask the Commission to determine the funding and procurement levels for solicitations to be held in those years. DPS Staff, after consultation with NYSERDA Staff, will also make recommendations with regard to the model or models to be used for the solicitations, e.g., auction; request for proposal (RFP); and/or standard offer (SO). In addition, DPS Staff will recommend the pricing model and the criteria to be used for the evaluation of proposals submitted under the models. These recommendations will be largely based upon the ability of the approach(es) to foster the goals of the Program and will consider the positions of the parties as expressed through the stakeholder workshops and advice provided by NYSERDA Staff and its consultants. The Commission will also decide the appropriate approaches for subsequent years.

3. Product Pricing and Term

Two critical considerations in procurement and contracting are the form of product pricing employed and the term of the contract to be allowed. When DPS Staff requests authorization for RPS Program solicitations for each of the next two

procurements, it will also include recommendations on the alternatives to be employed in the solicitations and will include descriptions of stakeholders' positions on these matters. Some, but not necessarily all, of the pricing options that may be recommended include:

- Fixed single price for entire term;
- Schedule/preset but varied prices over term;
- Indexed pricing; and
- Contracts for difference (i.e., includes variants)

Any consideration of a particular price structure will include an assessment of its impact on market behaviors. There are numerous variants that will be considered for the term of any contract. Such terms may vary by procurement cycle and perhaps within any one procurement cycle. The recommendation of a procurement approach will be correlated with the form of pricing to be used because of their interdependence.

4. Selection and Funding Decisions

Selection and funding of the individual proposals within the procurements will be based on the nature of the authorized solicitations. When an auction is conducted, the rules of the auction and the bids received will determine which bids are to be awarded and the specific funding for each bid within the authorized limits. Under a standard offer solicitation, the overall funding level and rate will also have been determined in advance. Under an RFP approach, the target levels for overall funding will be set forth in the RFP. After proposals are submitted, NYSERDA Staff will rank the proposals in accordance with the selection criteria set forth in the RFP. The individual project funding determinations will then be made by NYSERDA management, after consultation with the OEE Director, based on this ranked list. If Provisional Certification determinations are not required as a precondition to submitting proposals, the OEE Director will then review the ranked list of projects falling within the procurement funding limits and make Provisional Certification determinations. Proposals that are granted Provisional Certification will become eligible for contracting. NYSERDA will thereafter report to the Director of OEE any changes regarding the projects selected.

Certification and Procurement of Customer-Sited Tier Resources

1. Customer-Sited Tier Eligibility

Applicants will be required to complete project description and

information forms that NYSERDA will provide. The information on the forms must identify the resource to be installed in accordance with the Customer-Sited Tier eligibility requirements of the September 24 Order and any subsequent modifications of that Order. In general, funding will be limited to customers contributing to the RPS Program.

2. Customer-Sited Tier Funding and Allocation

DPS Staff and NYSERDA Staff will develop, for the Commission's approval, an implementation and allocation plan (Plan) to use the customer-sited tier funding efficiently in accomplishing the objectives in the September 24 Order. Based on analysis performed to date and the comments of parties to the RPS proceeding, it is expected that the Plan will include a recommendation regarding an initial, base level of funding to be allocated to each category of eligible resource. These initial, base funding commitments would demonstrate a limited, but definite, commitment to the development of each resource, thereby encouraging investment from the appropriate manufacturing and deployment sectors.

Allocation of the remaining funds to specific customer-sited resources would be considered annually by NYSERDA Staff and DPS Staff, using the criteria provided by the Commission, based on analyses of market readiness of the technologies and the distribution and installation industry in New York State. NYSERDA Staff and DPS Staff might, where appropriate for evaluation purposes, divide individual eligible technologies into subcategories based on size and application. Each of the criteria below would be considered, and NYSERDA Staff and DPS Staff may recommend that each be assigned a relative weight:

- Cost effectiveness relative to the retail price of electric power.
- Market risk as indicated through consumer awareness, the potential market size, and the availability of deployment services to meet consumer demand.
- The net environmental impact relative to clean fossil technology.
- Technical risk as indicated through the stage of product manufacturing, proven field experience and the ability of the resource to meet reasonable performance standards for the expected life of the resource, which should extend at least beyond 2013.

- The likelihood that manufacturing and/or deploying the resource will maintain or increase employment and/or economic development in New York State.
- Benefits to the New York State electric system through reduction in the peak load or the cost of power.
- Fuel diversity impact through a reduction in the use of fossil fuels.
- The potential for residential and small business sector participation.

These criteria would be used as a guide in determining the initial, base funding allocation to each category. Base funding and additional allocations would be adjusted each year based on factors such as interest in the program in previous years and changes in market factors that affect the criteria above.

The Plan would include recommendations on a combination of front-loaded incentive packages to reduce the installed cost of an eligible resource, performance incentives to ensure long-term operation, and competitive procurement, as appropriate, in order to maximize the effectiveness of the Customer-Sited tier in achieving the overall goals of the RPS Program. Incentive levels would be recommended in the Plan, and will be subject to periodic review.

DPS Staff will present the Plan to the Commission for its approval in the fourth quarter of 2005.

Process for Determining Eligibility of Additional Resources or to Move a Resource from One Tier to Another

A public process will be available for the consideration of amendments to the list of Eligible Resources, with regard to both the Main and Customer-Sited Tiers. Interested parties may request the inclusion of a new Resource and/or the extension of eligibility of an existing Main Tier resource to be included in the Customer-Sited Tier. The process to make these eligibility determinations will involve a petition being submitted to the Commission in compliance with the Commission's filing requirements, which include service on all parties listed on the Commission's official service list for the RPS proceeding. The official service list may be updated from time-to-time. The Commission's Secretary will have the discretion to extend the comment period that will be provided in accordance with SAPA, offer an opportunity for reply comments, and/or

to schedule a technical conference for the parties to discuss the petition. The Commission, on its own motion or upon request from DPS Staff, may also initiate the notice and comment process to consider the RPS Program eligibility of an additional or modified resource in either or both tiers.

As guided by the September 24 Order, the criteria for evaluating whether an additional or modified resource should be eligible to receive RPS Program support in either the Main Tier or the Customer-Sited Tier will consist of:

- the origin and composition of the generation fuel;
- the extent to which the resource will result in new and incremental renewable energy;
- the nature of the process transforming that fuel into electricity;
- the totality of the environmental and other impacts of the generation process, such as air emissions and waste products;
- the degree of development of the resource; and
- the probable cost of providing RPS Program support for that resource.

After the opportunity for comments on the notice expires, the Commission will make a decision on the petition and issue an Order that, if applicable, will modify the eligibility requirements outlined in the September 24 Order.

Criteria and Process for Determining Eligibility of Certain Existing Facilities (Maintenance Resources)

The following procedures will be implemented to determine the certification, selection, and funding for existing:

- in-State run-of-river hydroelectric facilities of 5 MW or less;
- wind turbines; and
- direct combustion biomass facilities

that were in commercial operation any time prior to January 31, 2003, i.e., maintenance resources. These procedures below will be reviewed and analyzed as part of the 2009 Review Report discussed later in this Plan. This review and analysis may result in the need for technical conferences and recommendations for changes.

1. Eligibility Requirements

The September 24 Order provided for a limited exception to the "vintage" requirements for RPS Program eligibility for certain existing facilities, as defined above. The Order states: "Providing for a case-by-case process for such facilities to seek financial assistance under the RPS Program balances the parties' competing concerns and our policy objectives by establishing a process enabling us to tailor any relief that might be provided so as to ensure that (1) the largest possible proportion of RPS Program funds are reserved for encouraging the development of additional renewable resources; and (2) that achievement of the overall target is not made more challenging due to the loss of existing resources from the baseline."

Some of the considerations and methods that will be used to judge financial need include:

a. An examination of relevant portions of the books and records of the facility (including a documented after-tax cash flow forecast) and, to the extent appropriate, of the facility owner/operator and any affiliates;

b. The basis for and reasonableness of expected operating and capital costs. This evaluation may include, among other things, a comparison to prior years' costs and a comparison to costs of like generation;

c. The existence of any other cash sources available to the facility, such as:

1) tax benefits
2) subsidies
3) contracts
4) other sources, including restructuring financing;

d. Whether market rules are increasing the costs of the facility and, if so, whether any steps can be taken to reduce such costs;

e. Whether the facility's real property tax assessment is consistent with the assessments imposed in similarly situated facilities elsewhere, and if not, what action has been taken to address this matter;

f. Whether the facility is required to operate as part of a package of assets that is financially viable as a whole;

g. Whether the facility generates enough revenue, based on expected output, to cover its operating costs;

h. Whether the facility generates enough revenue to make necessary capital improvements;

i. Whether the facility generates enough revenue to cover its fixed costs, including:

1) debt service

2) property taxes

3) security costs

4) other costs; and

j. Whether the facility has attempted to make use of other renewables programs available to it, such as Executive Order 111 and the voluntary green market.

2. Eligibility Certification Procedures for Maintenance Resources

Any entity seeking RPS Program maintenance resource eligibility for a facility must submit a request to the OEE Director. The request must include the entity's most recent three years' income statements, balance sheets, cash flow statements, and income tax returns related to the facility. The request must also identify the type of facility; date of commercial operation; list of affiliates; list of contracts; and description of financing arrangements. The request may be submitted at any time through the duration of the RPS Program.

The OEE Director will review the information submitted and may request further information or clarification. The OEE Director will then make a determination on the facility's eligibility for RPS Program maintenance resource status, taking into consideration each facility's circumstances and the amount of the assistance required. If a facility is determined to be RPS Program eligible, the OEE Director will certify such facility to NYSERDA as an eligible maintenance resource.

3. Selection/Funding of Maintenance Resources

For each such determination of eligibility, the OEE Director will recommend to the Commission, for its consideration and approval, either a set payment award amount at the minimum level necessary to ensure solvency of the resource and/or other measures that might be taken. Such awards of maintenance resource contracts may occur outside the Main Tier procurement cycle process.

To support the goal of maintaining baseline generation while making the greatest proportion of RPS Program funds available for encouraging the development of new renewable resources, the maintenance resource will be permitted to suspend performance under an RPS Program contract for 12 month or longer periods of the contract term, during which time it may sell its energy in programs outside the RPS Program (i.e., Executive Order 111, voluntary green markets). During such periods, NYSERDA will, of course, not make any payments under the contract. This approach will provide opportunities for these resources to continue operating without a need to draw on RPS Program funds, which would then be available to support additional projects.

Potential Modifications to the Environmental Disclosure Program (EDP) and Mechanism to Ensure Allocations and Disclosure of Renewable Power

Each of New York's six delivery companies will be required to provide to the Administrator of the EDP a breakdown, by load serving entity (LSE), of the dollars it collected from each LSE's customers served in the individual utility's territory. The Administrator will then add up the contributions of the customers of each LSE in each of the six delivery company's service areas where it operates, and assign a percentage of renewable energy to that LSE at the same percentage of its customers' contribution to the total RPS Program fund.

All LSEs doing business in New York State will provide, to their retail customers who pay an RPS Program charge, environmental disclosure labels that accurately reflect on a "product" basis the fuel type and emissions characteristics of their pro-rata share of electricity related to the RPS Program Main Tier, blended proportionately with the type of product they otherwise receive.

In addition, DPS Staff will consult with NYSERDA Staff and the NYISO, as well as the parties participating in this case, to explore whether New York would benefit from automating the EDP Program in a manner consistent with neighboring control areas to allow creation of renewable certificates as generation is recorded, thus making the conversion transaction market more liquid as they would be able to be traded year round.

Finally, DPS Staff and NYSERDA Staff will begin a public process in 2005 to address unbundling of attributes and power, and similar issues, with the goal of presenting recommendations to the Commission in the fourth quarter of 2005.

Monitoring and Evaluation (M & E) Program

The RPS Program's administration must be transparent, efficient, and verifiable. Accordingly, NYSERDA will implement a comprehensive monitoring and evaluation (M&E) program, as described below, that will inform the Commission, DPS Staff, and interested parties of the RPS Program's progress in meeting the Commission's goals. Evaluation models and the overall framework used for the New York Energy $mart^{SM} system benefits charge (SBC) program will be used to the extent such models and framework are appropriate for the RPS Program and its specific objectives. Special care has been taken to ensure that the RPS Program M&E activities described below will be efficient, appropriate for the RPS Program, and necessary to fulfill the goals of the program.

The overall M&E program will include brief year-end reports, an expanded Review Report in 2009, and a second Review Report in 2013 when the program is scheduled to end. Additional reports may be issued from time-to-time as appropriate.

1. Year-End Reports

   The year-end reports will provide the following, for both the subject year and cumulatively:

   a. Aggregated quantities of RPS Program energy generated and payments associated with the environmental attributes of that energy, for both the Main and Customer-Sited Tiers, with customer-sited tier data based on calculations of assumed energy produced where necessary;

   b. Progress to date in meeting the RPS Program’s annual targets;

   c. The number of RPS Program solicitations issued, number of proposals received, and quantities of environmental attributes subject to RPS contracts and to pending contracts;

d. The number of customer-sited installations authorized and quantities of environmental attributes associated with those installations; and

e. Such other financial and contractual data, as well as stakeholder feedback (including information obtained from the NYISO with respect to any reliability issues that may have arisen) as may be appropriate to ensure full and accurate reporting to the Commission and the public.

The year-end reports will be issued for information purposes by the end of the first quarter of the succeeding year. They will be accessible through both the NYSERDA and DPS Web sites.

2. 2009 Review Process

In addition to the year-end reports described above, an expanded review report will be issued in 2009 to address issues identified in the September 24 Order and address other issues that may be raised by NYSERDA, DPS, the Commission, and stakeholders. Information on the renewable energy produced from the voluntary programs, Executive Order 111 procurements, LIPA renewable programs, Customer Sited Tier programs, and the Maintenance Tier generators will then be compiled as part of the 2009 review and included in a report to the Commission that will address the State's progress toward meeting its renewable goals. Any changes needed to meet the renewable statewide goal will also be recommended. This report will also likely make recommendations concerning subsequent procurements.

Specific issues to be addressed in the 2009 Review Report include:

a. An overview of program status;

b. An assessment of the program’s success and attribution of the Program in achieving program goals and objectives;

c. The progress of New York’s RPS Program as compared with the progress of programs in other states;

d. An assessment of the impact on the Commission's Renewable Policy goals as a consequence of achievements in the voluntary green market;

e. The complementary role of future demand-side management and energy efficiency initiatives to reduce statewide electric load;

f. The estimated impact of reduced load on the amount of new renewable generation necessary to meet RPS Program goals and the amount of funding required for the RPS Program;

g. An assessment of program costs and benefits, including calculation of cost/benefit ratios, as appropriate (impacts of renewable resources developed through the RPS Program on the environment, energy security, economic development, and electric system reliability will be addressed to the extent practicable);

h. Macroeconomic benefits accruing to New York as a result of implementation of the RPS Program, including the extent to which the RPS Program has advanced renewable resource technologies and attracted jobs and renewable resource generators, manufacturers, and installers to New York;

i. The interaction of the RPS Program with the Regional Greenhouse Gas Initiative as the latter is implemented;

j. Possible modifications to the list of eligible resources, if deemed appropriate;

k. Possible modifications to the delivery requirement, if deemed appropriate;

l. Steps for transitioning the RPS Program to a more market-based system;

m. Options for developing a regionally compatible certificate tracking and trading system;

n. Input from stakeholders; and

o. Additional recommendations for improving the RPS Program.

Some of the elements to be addressed in the 2009 Review Report will involve matters that commenced early in the implementation process and will have been addressed to some extent as part of the prior year-end status reports. The 2009 review

process will provide a timely forum to address the status of these and other important issues from the viewpoint of three years of program experience.

3. 2013 Review Process

A second review report will be prepared in 2013 when the program is scheduled to end.

Administrative, Monitoring, and Evaluation Costs

NYSERDA will be compensated for the actual administrative, evaluation, and monitoring costs associated with fulfillment of its responsibilities as the administrator of the RPS Program. NYSERDA has developed, through consideration of expected direct payroll, fringe benefits, indirect labor, overheads, outside consulting, and non-personnel service costs, estimates of its yearly costs of administering, monitoring, and evaluating the RPS Program. Accordingly, an Administrative, Monitoring and Evaluation budget of $3.2 million per year, on average, through the year 2013 is appropriate.[4] NYSERDA will annually file with Staff a report on the administrative, monitoring, evaluation, and State government cost expenses incurred in that year. Such reports will include categories for direct payroll, fringe benefits, indirect labor, overhead, other than personal service costs, consulting costs, and state government costs. DPS Staff and NYSERDA Staff will verify the actual costs, and DPS Staff will report to the Commission any recommended changes to the allowed costs.

Modifications to Plan

This Plan may be modified by the Commission from time-to-time to accommodate changing needs of the RPS Program and Commission objectives.

[4] The annual budget projection does not include New York State government fees that NYSERDA indicated it may be assessed under Public Authorities Law §2975.

RPS Main Tier Eligible Electric Generation Sources
Categorization of Source Generation Type

General Requirements:

(1) To be eligible, a generation facility must have first commenced commercial operation on or after January 1, 2003, except for certain Maintenance Resources listed below.

(2) Eligibility is limited to the electricity sold in a retail sale in New York State made by a load serving entity to a customer – self-generation is not eligible in the Main Tier.

(3) To be eligible, a generation facility must forego the receipt of any System Benefits Charge (SBC) funds commencing with the first period of generation related to the first receipt of RPS funds.

Category	Source	Other Requirements
Biogas	Landfill Gas (Methane) Reciprocating/Internal Combustion Engine	
	Sewage Gas (Methane) Reciprocating/Internal Combustion Engine	
	Manure Digestion (Methane) Reciprocating/Internal Combustion Engine	If required to have a SPDES permit by NYSDEC regulations, a Concentrated Animal Feeding Operation (CAFO) providing the manure must have and be in compliance with its current Agricultural Waste Management Plan (AWMP) developed by a duly qualified Agricultural Environmental Management (AEM) Planner and must be operating in compliance with any applicable SPDES permit. If not required to have a SPDES permit, the CAFO must be operating in compliance with the best management practices for a facility of its size set forth in the *Principles and Water Quality Protection Standards* specified in the *Agricultural Environmental Management (AEM) Framework & Resource Guide* developed by the NYS Department of Agriculture and Markets and the NYS Soil and Water Conservation Committee.
	Anaerobic Digestion (other biogas digestion using agricultural or food processing residues and by-products)	
	Biomass* Thermochemical Gasification (syngas)	Facilities utilizing adulterated biomass must demonstrate that all feedstocks that are not source separated in fact come from NYSDEC-permitted solid waste facilities that pay for NYSDEC-provided monitors to ensure that their biomass processing is consistently within their facility permits and conditions.
	Biogas (from eligible sources of biomass* feedstock) Combined Heat & Power	
	Biogas (from eligible sources of biomass* feedstock) Co-fired with existing fossil-fuel Combustion	Only the electricity generated from the biomass portion of the fuel is eligible.
Biomass *	Biomass Direct Combustion	
	Biomass Combined Heat & Power	
	Biomass Co-fired with existing fossil-fuel Combustion	Only the electricity generated from the biomass portion of the fuel is eligible.

Liquid Biofuel	Biomass* Liquification through acid or enzymatic hydrolysis (Ethanol)	Facilities utilizing adulterated biomass must demonstrate that all feedstocks that are not source separated in fact come from NYSDEC-permitted solid waste facilities that pay for NYSDEC-provided monitors to ensure that their biomass processing is consistently within their facility permits and conditions.
	Biomass* Esterfication (Biodiesel, Methanol)	
	Biomass* Thermochemical Pyrolysis (Bio-oil)	
	Biomass* Hydrothermal Liquefaction	
	Liquid Biofuel (from eligible sources of biomass* feedstock) Combined Heat & Power	
	Liquid Biofuel (from eligible sources of biomass* feedstock) Co-fired with existing fossil-fuel Combustion	Only the electricity generated from the biomass portion of the fuel is eligible.
Fuel Cells	Solid Oxide Fuel Cells (SOFC)	
	Molten Carbonate Fuel Cells (MCFC)	
	Proton Exchange Membrane Cells (PEM)	
	Phosphoric Acid Fuel Cells (PAFC)	
Hydroelectric	Hydroelectric Upgrades	No new storage impoundment, eligibility limited to the incremental production associated with the upgrade.
	New Low-Impact Run-of-River Hydroelectric	Facility capacity limited to 30MWs or less with no new storage impoundment.
Solar	Photovoltaics	
TidalOcean	Tidal Turbine Turbine	
	Ocean Wave Turbine Turbine	
	Ocean Current Wave Turbine	
	Ocean Thermal Pumped Storage Hydro Powered by Tidal	
Wind	Wind Turbines	
Maintenance Resources	Hydroelectric	In-State run-of-river hydroelectric facilities of 5MWs or less in commercial operation at any time prior to January 1, 2003 that demonstrate need to receive RPS financial support to operate.
	Wind Turbines	In-State facilities in commercial operation at any time prior to January 1, 2003 and that demonstrate need to receive RPS financial support to operate.
	Biomass Direct Combustion	In-State facilities in commercial operation at any time prior to January 1, 2003 and that demonstrate need to receive RPS financial support to operate.

***See Definition of Eligible Sources of Biomass**

RPS Customer-Sited Tier Eligible Electric Generation Sources
Categorization of Source Generation Type

General Requirements:

(1) To be eligible, a generation facility must have first been placed into service on or after January 1, 2003.

(2) Self-generation is eligible in the Customer-Sited Tier.

(3) Only facilities located in New York State shall be eligible for funding in the Customer-Sited Tier.

Category	Source	Other Requirements
Fuel Cells	Solid Oxide Fuel Cells (SOFC)	
	Molten Carbonate Fuel Cells (MCFC)	
	Proton Exchange Membrane Cells (PEM)	
	Phosphoric Acid Fuel Cells (PAFC)	
Solar	Photovoltaics	
Wind	Wind Turbines	Facilities 300 kWs or less.

Definition of Eligible Sources of Biomass

Agricultural Residue

Woody or herbaceous matter remaining after the harvesting of crops or the thinning or pruning of orchard trees on agricultural lands. Agricultural by-products such as leather and offal and food processing residues that are converted into a biogas or liquid biofuel.

Harvested Wood

Wood harvested during commercial harvesting. The biomass facility owner must have and be in compliance with a current Forest Management Plan prepared by a professional forester that includes standards and guidelines for sustainable forest management and requires adherence to management practices that conserve biological diversity, productive forest capacity and promotes forest ecosystem health. A fuel supplier of a biomass facility must be in compliance with a biomass facility's forest management plan and also prepare a harvest plan that includes landowner objectives; a map of the area to be harvested; skid road layout; locations of all streams, wetlands and water bodies; forest type designation, anticipated volume of wood to be harvested; silvicultural techniques and best management practices to be implemented; and provisions for the monitoring of harvest operations by a professional forester. Periodic inspections of harvesting operations by state authorities or approved nongovernmental forest certification bodies will be performed to ensure that harvest operations conform to the standards.

Mill Residue Wood

Hogged bark, trim slabs, planer shavings, sawdust, sander dust and pulverized scraps from sawmills, millworks and secondary wood products industries.

Pallet Waste

Unadulterated wood collected from portable platforms used for storing or moving cargo or freight.

Refuse Derived Fuel

The source-separated, combustible, untreated and unadulterated wood portion of municipal solid waste or construction and demolition debris generally prepared by a densification process resulting in a uniformly sized, easy to handle fuel pellet or briquette.

Site Conversion Waste Wood

Wood harvested when forestland is cleared for the development of buildings, roads or other improvements.

Silvicultural Waste Wood

Wood harvested during timber stand improvement and other forest management activities conducted to improve the health and productivity of the forest. The biomass facility owner must have and be in compliance with a current Forest Management Plan prepared by a professional forester that includes standards and guidelines for sustainable forest management and requires adherence to management practices that conserve biological diversity, productive forest capacity and promotes forest ecosystem health. A fuel supplier of a biomass facility must be in compliance with a biomass facility's forest management plan and also prepare a harvest plan that includes landowner objectives; a map of the area to be harvested; skid road layout; locations of all streams, wetlands and water bodies; forest type designation, anticipated volume of wood to be harvested; silvicultural techniques and best management practices to be implemented; and provisions for the monitoring of harvest operations by a professional forester. Periodic inspections of harvesting operations by state authorities or approved nongovernmental forest certification bodies will be performed to ensure that harvest operations conform to the standards.

Sustainable Yield Wood (woody or herbaceous)

Woody or herbaceous crops grown specifically for the purpose of being consumed as an energy feedstock (energy crops).

Urban Wood and Related Waste

The source-separated, combustible untreated and uncontaminated wood portion of municipal solid waste or construction and demolition debris. Adulterated forms of biomass such as nonrecyclable wood (e.g. plywood and particle board), paper, paperboard boxes, textiles, food, leather, yard waste and leaves may be used as a feedstock for biogas or liquid biofuel conversion technologies, if it can be demonstrated that the technology employed would produce power with emissions less than or equal to emissions produced while using only unadulterated feedstock.