STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service Commission held in the City of Albany on June 20, 2006

COMMISSIONERS PRESENT:

William M. Flynn, Chairman
Thomas J. Dunleavy
Leonard A. Weiss
Patricia L. Acampora
Maureen F. Harris, abstaining

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

ORDER ON CUSTOMER-SITED TIER IMPLEMENTATION

(Issued and Effective June 28, 2006)

BY THE COMMISSION:

INTRODUCTION

By Order issued September 24, 2004,[1] we 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.[2] Consistent with this policy, we also adopted a Renewable Portfolio Standard (RPS) Program. In a subsequent Order, we approved an Implementation Plan to effectuate the RPS Program.[3] The April 2005 Order required Department of Public Service (Staff) and the New York State

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

[2] Achievement of this goal requires implementation of a complementary program on the part of the Long Island Power Authority.

[3] Case 03-E-0188, supra, Order Approving Implementation Plan, Adopting Clarifications, and Modifying Environmental Disclosure Program (issued April 14, 2005) (April 2005 Order).

Energy and Research Development Authority (NYSERDA) to meet with interested parties and stakeholders and then "develop, for our approval, an implementation and allocation plan to utilize the Customer-Sited Tier funding efficiently in accomplishing the objectives in the September 2004 Order."[4]

In this Order, we establish parameters and principles that NYSERDA should use in developing an Operating Plan to implement the Customer-Sited Tier component of the RPS Program.

BACKGROUND

We noted in the September 2004 Order the importance of accelerating development of emerging technologies, such as photovoltaic systems, fuel cells, customer-sited small wind facilities, and similar technologies, because of their environmental benefits and the ability of some of the technologies to be sited in urban, heavy-load areas. Consequently, we set aside two percent of the total RPS incremental megawatt-hour (MWh) requirement for the Customer-Sited Tier. We established this Tier's eligibility requirements to include only self-generation, "behind-the-meter" facilities located in New York that have been or will be placed into service on or after January 1, 2003. We also provided for funding from ratepayers to support the RPS Program, and we attached a cost study to the Order to demonstrate the methods considered in determining funding needs.

The September 2004 Order stated that funding to support technologies within the Customer-Sited Tier should be allocated based on a comprehensive review of the relative costs and benefits, including the potential for specific projects to create or sustain jobs in New York, and the ability of the resources to support load pockets throughout the State by reducing demand from the grid during peak demand periods. It further said that the allocation should also support greater fuel diversity,

[4] April 2005 Order, p. 25.

opportunities for residential and small business customers to participate, and environmental benefits.

In the April 2005 Order, we asked Staff to submit a recommendation regarding an initial, base level of Customer-Sited Tier funding to be allocated to each eligible technology. We stated that these base funding levels should demonstrate a limited, but definite, commitment to the development of each technology, thereby encouraging investment from the appropriate manufacturing and deployment sectors. NYSERDA was requested to develop metrics and weighting factors to determine how funds would be allocated among projects and technologies, taking into account the technical and market risks resulting from implementation of each technology. As noted in the April 2005 Order, 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, we further stated, could be adjusted each year depending on factors, such as interest in the program in previous years and changes in market factors that affect funding criteria.

SAPA NOTICE

A Notice regarding these issues was published in the State Register pursuant to State Administrative Procedure Act (SAPA) §202(1) on October 5, 2005. American Wind Energy Association (AWEA), DayStar Technologies, Inc. (DayStar), the New York Farm Bureau (Farm Bureau), Plug Power Inc. (Plug), the Renewable Energy Technology and Environment Coalition[5] (RETEC), Saratoga Biogas LLC (Saratoga), Solar Energy Industries Association (SEIA), and UTC Power (UTC) submitted comments.

[5] RETEC members include: American Lung Association of New York State, American Wind Energy Association; Community Energy, Inc., Environmental Advocates; Fuel Cell Energy Inc., Hudson River Sloop Clearwater, Natural Resources Defense Council, Pace Energy Project, Plug Power Inc., Solar Energy Industries Association, and Sustainable Energy Development, Inc.

The Notice stated that we are considering specific design details and methodologies pertinent to the Customer-Sited Tier to ensure that photovoltaic generation, small wind systems, and fuel cells, as well as any similar technologies that may become eligible for RPS Program support in the future, would continue to play a role in diversifying New York's energy mix and stimulating economic development in the State. Technologies eligible for support at the time of the publication of the Notice included solid oxide fuel cells, molten carbonate fuel cells, proton exchange membrane fuel cells, phosphoric acid fuel cells (collectively, fuel cells), solar photovoltaic generation, and wind turbines rated at 300 kW or less (small wind). Subsequent to the publication of the Notice, anaerobic digestion technologies were added to the list of eligible Customer-Sited Tier resources.[6]

The Notice stated that, at a July 13, 2005 workshop, NYSERDA and Staff presented to interested parties a general approach, consistent with our direction in the April 2005 Order, to establish a relatively limited base level of funding with additional funding of a specific technology dependent upon satisfaction of various criteria. The Notice reported that many participants suggested that there is a need to provide certainty

[6] Case 03-E-0188, supra, Order Approving Request for Inclusion of Methane Digester Systems as Eligible Technologies in the Customer-Sited Tier (issued November 2, 2005). The authorization applies to anaerobic digestion systems in general, not just those located on farms and using farm waste products, as long as the generator is connected and in place behind the customer's meter, the customer pays into the RPS Program fund, and the generation facility does not exceed the size limitation set forth later in this Order. An updated copy of Appendix B to the September 2004 Order, which identifies the eligible technologies for the Main and Customer-Sited Tier is attached to this Order and entitled "Eligible Electric Generation Technologies." It reflects our addition of anaerobic digestion systems to the Customer-Sited Tier and also provides a more accessible format for identifying all the currently eligible technologies under the RPS Program.

for developers and investors by allocating relatively large blocks of the funds at the outset of the program. There was also interest in allowing annual allocations to roll over to the next year to encourage growth in market demand.

The Notice called for comments on proposals to:

- maintain annual funding levels constant through 2009, and then conduct an evaluation of the Customer-Sited Tier as part of the RPS Program review in 2009, with future funding allocations made at that time;
- keep unused funding with the technology until the allocation is evaluated in 2009;
- establish annual Customer-Sited Tier RPS Program funding allocations through 2009 at 20%, on a discretionary basis, for technologies added to the eligibility list or distributed on an as-needed basis to eligible technologies, with the 80% balance divided 43% for solar photovoltaic generation, 43% for fuel cells, and 14% for wind;
- allow use of buy-down incentives for solar and small wind projects, similar to the incentives used in the System Benefits Charge Program administered by NYSERDA;
- allow use of buy-down and performance-based incentives, along with competitive solicitations, for fuel cell projects;
- authorize NYSERDA to evaluate the effectiveness of specific Customer-Sited Tier programs and modify them as necessary to meet changing market needs, except that any changes in the structure of payments would require Commission approval; and
- eliminate the 300 kilowatt (kW) size limitation on wind projects eligible for the Customer-Sited Tier.

FUNDING LEVELS

Proposal

The Notice requested comments on the proposal to maintain annual funding levels constant through 2009, at which time an evaluation of the Customer-Sited Tier would be conducted as part of the RPS Program review, with future funding allocations made at that time.

Comments

RETEC and Plug state that the overall level of funding available under the Customer-Sited Tier is inadequate, as it is far lower than the $70 million per year RETEC advocated. RETEC warns that, with the addition of anaerobic digestion systems and removal of the 300 kW cap on small wind projects, greater pressure will be placed on the limited funds available. It recommends that the Commission conduct an annual review to determine if funds are sufficient to encourage the development of emerging technologies. Plug adds that, in evaluating funding levels, we should consider the extent to which the Customer-Sited Tier is promoting economic development within New York. It asserts that the overall funding level should be increased to the extent that funds are used to support anaerobic digestion systems.

Discussion

Staff and NYSERDA considered the funding resources, targets, start-up constraints and the state of development of each technology. Staff informs us, and we concur, that $45 million in overall nominal dollar funding, net of administration costs, should provide for a reasonable Customer-Sited Tier program target through 2009, if allocated among the eligible technologies as described in the next section of this Order.

Accordingly, we authorize NYSERDA to conduct, as appropriate, solicitations for Customer-Sited Tier technologies through 2009, with payments commencing at appropriate times after

completion of an Operating Plan and with an overall target of $45 million for project funding. The main advantage of adopting this approach is that it provides developers with some certainty about the availability and timing of funding for these technologies. Staff reports that this is the most critical need identified by the parties during the workshops. It also provides time for the Customer-Sited Tier Operating Plan and the solicitation process to be developed and publicized.

We appreciate concerns about the adequacy of the Customer-Sited Tier funding. We will reexamine the Customer-Sited Tier target, expenditures, and successes as part of the 2009 review and will make adjustments as necessary to further attainment of the goals. NYSERDA and Staff will also monitor program expenditures and targets throughout the term and advise us if there is any need for consideration of changes at an earlier date. Further, as noted below, we will establish a mechanism that will provide for some shifting of funds each year as appropriate.

FUNDING ALLOCATIONS

Proposal

The Notice proposed establishment of annual Customer-Sited Tier RPS Program funding allocations through 2009 at 80% for the combined solar photovoltaic, fuel cells, and small wind technologies, and at 20%, on a discretionary basis, for technologies that we might add to the eligibility list or for reallocation or distribution (on an as needed basis) to the eligible technologies. The 80% was to be divided, with 43% of the 80% for solar photovoltaic systems, 43% for fuel cells, and 14% for small wind. This is equivalent to 34.4%, 34.4% and 11.2% of the overall funding for solar, fuel cells, and small wind, respectfully, and 20% for discretionary purposes. This proposal for fixed allocations through 2009 would modify the decision made in our April 2005 Order to re-evaluate funding allocations on an annual basis.

Comments

RETEC and Plug support the proposed allocation ratio. Plug recommends that changes in the eligible resources should not result in a reduction of allocations to solar and fuel cells and that we should consider other methods of satisfying the needs of the new participants. AWEA states that the proposed funding allocated to small wind energy resources will be insufficient. AWEA and RETEC recommend that the 20% set aside/discretionary allocation should be used to fund anaerobic digestion systems, as well as to accommodate excess demand in one or more other technology categories.

RETEC further states that, should the discretionary fund be insufficient to fulfill both of these purposes, we should consider increasing the funding available to the Customer-Sited Tier, rather than reducing allocations to other technologies. AWEA and Plug Power agree with the proposal to roll over unused funds for customer-sited resources on an annual basis and not add them to the discretionary fund or make them available for development of other technologies. Plug states that procurements under the Customer-Sited Tier should provide preferences for projects that are manufactured in New York or which otherwise bring economic benefit to the State.

The Farm Bureau recommends allocation of 80% of the total Customer-Sited Tier funds to the four qualified technologies (anaerobic digestion, solar power, small wind, and fuel cells) in equal amounts, with the remaining 20% set aside to support future qualified technologies or to support existing technologies that may exceed the base level funding.[7] RETEC, on the other hand, asserts that inclusion of anaerobic digestion

[7] Subsequent to the close of the 45-day comment period, a series of letters were received supporting the positions advocated by the Farm Bureau: equal funding for anaerobic methane digestion systems and ownership by farmers of any environmental attributes unbundled from energy.

systems should not have the effect of reducing funding allocations for other technologies.

UTC, a fuel cell developer, urges us to adopt the proposed percentage allocations and suggests that another fuel cell category be established to support installation of "secure" power at locations that provide essential public services (e.g., police stations and hospitals). UTC urges that we allow participant input on the allocation of the 20% discretionary funds.

Discussion

We will modify the allocation formula presented in the Notice to take into account the recent inclusion of anaerobic digestion systems as an eligible technology. The allocation established here, based on consultation with NYSERDA, will provide an appropriate distribution of funds when taking into consideration market and technology risk factors as well as resource potential and the ability to meet the Customer-Sited Tier targets.

In the case of photovoltaics, there is a growing momentum for the installation of systems due to activities funded by the System Benefits Charge Program. A strong commitment to the technology is necessary to continue to expand the number of market participants consistent with achievements in the System Benefits Charge Program, and RPS Program funds are needed due to the discontinuation of Systems Benefits Charge funding for generation of technology installations.[8] Consequently, we allocate 30.7 percent of the available funds to this technology.

NYSERDA reports that, although the small wind program under the System Benefits Charge Program has also developed momentum, it has not been as successful as the photovoltaic

[8] System Benefits Charge Program funding for generation technology installations will cease in the near future. Funding for renewable generation technologies will now be available through the RPS Program.

program. This is primarily due to difficulties in identifying customer sites that meet wind resource and setback requirements. In addition, there are a limited number of turbine technologies serving the small wind market. Accordingly, a 10.0 percent allocation of the funds to this technology is reasonable.

Newer programs, such as those involving fuel cells and anaerobic digestion systems, will take more time to develop. Fuel cell technology, in particular, is currently receiving considerable research and demonstration funding support through various New York State programs. Given these considerations, a 24.9 percent funding allocation to fuel cells is reasonable to support new installations under the RPS Program.

The need for farm-based anaerobic digestion systems is driven, in part, by environmental concerns associated with the control of manure. While New York State farmers and other potential users in New York State have relatively little experience in the installation and operation of anaerobic digestion systems, expertise does exist outside of New York State and considerable interest in this technology is developing here. An early commitment of funds to this technology should attract market participants to New York, in addition to encouraging farmers and others to make the decision to install anaerobic digestion systems and helping them gain operating experience during initial years of operation. Similar conclusions may also be drawn with regard to non-farm-based anaerobic digestion systems. We will allocate 24.4 percent to this technology.

Accordingly, we allocate 30.7% of the available funds to solar photovoltaic systems, 10% to small wind projects, 24.9% to fuel cells, 24.4% to anaerobic digestion systems, and 10% (plus funds remaining from prior years) for discretionary purposes; any funds remaining, as discussed below, will be available for redistribution by NYSERDA to the eligible technologies as needed.

Using these percentages, we project that the $45 million in funds available for Customer-Sited Tier technologies (exclusive of administrative fees) through 2009 will be allocated as follows: about $13.8 million for solar photovoltaic systems; $11.2 million for fuel cells; $11.0 million for anaerobic digester systems; $4.5 million for small wind projects, and $4.5 million for discretionary purposes.

With regard to Plug's recommendation that preferences be given under the Customer-Sited Tier to projects manufactured in New York or which otherwise bring economic benefit to the State, we note that this issue was addressed in part in our September 2004 Order. Therein, we stated that creation of a Customer-Sited Tier as part of the overall RPS Program ensures that certain emerging technologies will play a role in diversifying the State's energy mix and stimulating economic development opportunities in the State. We went on to state that funding in this category is to be allocated to projects based on a comprehensive review of the relative costs and benefits, including the potential for specific projects to create or sustain jobs in New York State, the ability of the resources to support load pockets throughout the State by reducing demand from the grid during peak demand periods, support for greater fuel diversity, opportunities for residential and small business customers to participate, and environmental benefits. We expect that economic benefits for New York State will occur with the overall allocations we are providing here and the specific programs NYSERDA will identify in the Operating Plan.

The next step is for NYSERDA and Staff to develop an Operating Plan that will define the specific programs and mechanisms to be used within the broader categories, the time frames for the programs, and the portion of the overall funding allocated for each calendar year (or portion thereof, in the case of 2006). In developing specific programs and mechanisms, NYSERDA and Staff will need to consider the factors we

identified, including the ability to create or sustain jobs in New York State. This, however, does not imply that preferences should automatically be given to any specific program within the overall category or to any project, only that the factors identified need to be considered as part of a cost-benefit analysis.

With respect to UTC's suggestion to establish a separate fuel cell category to support installations of secure power for essential public services, we concur that such an allocation within the fuel cell category should be considered in the development of the Operating Plan. Accordingly, NYSERDA is authorized to define the characteristics and funding for the "secure power" subcategory, if it appears reasonable to do so as part of the overall fuel cell program. While we will retain jurisdiction over the overall funding levels and allocations, as discussed elsewhere in this Order, the allocations for specific programs within the general technology categories may be set and adjusted by NYSERDA, in consultation with Staff, with due regard to the goals we set in the September 2004 Order.

With respect to UTC's call for participant input into allocation of the discretionary funds, we understand that NYSERDA will conduct workshops from time-to-time during its implementation of the Customer-Sited Tier. These workshops should provide NYSERDA with the necessary input to carry out its responsibilities. As such, we do not at this time see a need to require additional participant input.

UNUSED FUNDS

Proposal

The Notice stated that we are considering a proposal to roll over unused funding in any listed technology to the next year and kept with the same technology.

Comments

AWEA, Plug, and UTC agree with the proposal, but UTC also recommends reallocation of unspent funds in the discretionary category proportionally among the other technologies on an annual basis. SEIA prefers a "recharge" approach whereby a particular technology would start each year with a set amount of funding.

Discussion

Upon consideration of the comments, we conclude that a blending of the roll-over and re-charge proposals is most reasonable. At the end of each funding year, monies unused by a particular technology would be placed in the discretionary fund category for use the next funding year as additional funding for eligible technologies that, in NYSERDA's judgment, would benefit from the increased allocation and for use by any new technology we might add. At the beginning of each year, each of the technologies would start anew with an annual allocation, with access to the discretionary fund on an as-needed basis.

EVALUATIONS

Proposal

The Notice proposed that we would authorize NYSERDA to evaluate the effectiveness of individual Customer-Sited Tier programs and modify them as necessary to meet changing market needs, except that any changes in the structure of payments would require our approval.

Comments

UTC and SEIA recommend, for each technology, an annual evaluation of funding for the following year, taking into account progress in development of the technology and use of funds.

Discussion

It is preferable to leave the base funding allocation percentages constant through at least 2009, unless extraordinary circumstances arise. Thus, we will allow NYSERDA to evaluate the

effectiveness of the specific programs and modify them. The overall funding allocations would remain constant. Allowing NYSERDA to modify the programs, rather than removing funding entirely, should address the concerns raised by UTC and SEIA.

BUY DOWN INCENTIVES

Proposal

The Notice proposed allowing use of buy-down incentives (payments prior to operation) for solar and small wind projects, similar to the incentives used in the System Benefits Charge Program, and allowing use of both buy-down and performance-based incentives, along with competitive solicitations, for fuel cell projects.

Comments

UTC asserts that buy down/standard offer incentives should be used for Customer-Sited Tier technologies under one megawatt (MW). It states that competitive solicitations should only be used for substantially larger projects that are more likely to have a higher tolerance for the additional cost and time associated with such solicitations. UTC also recommends that, in the 2009 review, we evaluate whether a competitive process is effective for smaller installations.

Discussion

UTC's recommendations with respect to small projects are reasonable. NYSERDA shall consider them and incorporate them, if feasible, when establishing parameters for the solicitations. The specific proposals stated in the Notice that would allow for performance-based payments and competitive solicitations for fuel cell projects are also reasonable, and they shall be considered by NYSERDA. NYSERDA will detail its plans for these incentives in establishing solicitation procedures and designs in the Operating Plan.[9]

[9] Plans for anaerobic digestion systems solicitations should be included.

SMALL WIND ELIGIBILITY LIMITATION

Proposal

The Notice proposed elimination of the 300 kW size limit on small wind projects eligible for the Customer-Sited Tier.

Comments

AWEA and RETEC recommend that small wind projects greater than 300 kW be eligible for funding. They also recommend instituting incentives graduated according to the size of the facilities for Customer-Sited Tier small wind projects.

Discussion

The 300 MW limit was set to encourage development of windpower units sized to meet typical small farm needs. Although these typical small farm wind systems are an important market that should be developed, it is also beneficial to the State to encourage the use of small wind facilities at other larger facilities. Accordingly, we will eliminate the 300 kW limit and replace it with a limit based on the size of the load at the customer's meter. To preserve the distinction between the Customer-Sited Tier and the Main Tier and to encourage the development of small generation equipment, we modify the eligibility limit to allow for a facility design capacity as large as necessary to meet the peak power needs at the customer's meter.[10]

With regard to the recommendation that incentives for wind projects be graduated by size, we note that we previously decided that matter in our April 2005 Order. There, we said that incentive levels should vary by the sizes of the facilities so that funding levels and project needs would be more closely aligned.

[10] Customer-Sited Tier facilities, because of physical requirements, can be slightly larger than the customer's load, if an exact match is not practicable. This limitation will apply for all eligible Customer-Sited Tier resources.

OTHER ISSUES

Proposals

In their comments in response to the Notice, several parties present additional proposals for our consideration.

Comments

AWEA, RETEC, and the Farm Bureau recommend that owners and operators of Customer-Sited Tier resources be allowed to trade renewable energy credits associated with their facilities. They propose that any attribute trading system established for New York accommodate the renewable energy credits created with renewable energy generated from these Customer-Sited resources. RETEC notes that the ability to trade attributes will support the voluntary market for green power. The Farm Bureau recommends that each farm operation that installs a renewable technology retain control of any renewable energy credits associated with that technology. It argues that the farmer would benefit from more flexibility in adopting new business models and the ability to participate in the voluntary green market following the conclusion of the RPS Program.

The Farm Bureau recommends that NYSERDA establish industry work groups from each technology to advise on the delivery structures and that we allow NYSERDA the flexibility to design delivery structures according to advice from the workgroup and make changes as markets evolve.

RETEC recommends reservation of a percentage of the Customer-Sited Tier for small customers and rolling over any unused funds allocated for small customers from year to year. It states that the optimal allocation would differ for each technology and 20% would be an appropriate allocation within the fuel cell category.

AWEA recommends use of a dollar per kW installed basis incentive for small wind systems, rather than a percentage of the system's total installed cost, as the System Benefits Charge program provides.

DayStar requests that we clarify that manufacturers of solar photovoltaic systems will receive direct incentives, not just that customers will receive incentives that might ultimately benefit the manufacturers, if the customer buys their products.

Discussion

The Farm Bureau recommends that NYSERDA establish industry work groups from each technology area to advise on the delivery structures. This is the process that the Department of Public Service and NYSERDA generally use to obtain stakeholder views on specific issues and in the development of recommendations. We expect that Staff and NYSERDA would continue to hold workshops as necessary.[11]

The set asides for small customers recommended by RETEC are not needed to encourage participation by small customers installing photovoltaic or anaerobic digestion systems. Approximately 80% of the participants in the photovoltaic portion of the System Benefits Charge program are residential customers. In the case of anaerobic digestion systems used behind customers' meters, the size of the facility would typically be controlled by the quantity of available fuel and the size of the customer's peak load at the meter. These qualifications would result in small systems. No special provision is necessary to include small customers.

Fuel cells are available in various capacity ranges to meet varying customer demands; the size of the customer's peak load at the meter would be the only limiting factor. In our April 2005 Order, we note that a component of the Customer-Sited Tier program should be allocated to fuel cells of 25 kW or less. To provide sufficient incentives for these smaller sized fuel cells, we expect NYSERDA to provide in its Customer-Sited Tier Operating Plan a component, within the larger Fuel Cell

[11] The proposals for trading environmental attributes unbundled from energy and ownership by farmers of the attributes will be addressed in subsequent Orders.

technology program, that is targeted at small fuel cell customers using systems less than or equal to 25 kW.[12]

AWEA recommended a dollar per kW installed basis incentive for small wind systems. We understand that the ratings of wind turbines are not yet set based on consistent industry standards. As such, AWEA's recommended method could result in overpayments for over-rated wind turbines and encourage over-rating of others. Until an acceptable standard is established, NYSERDA will establish the appropriate mechanisms for making payments to these resources. We expect the Operating Plan to define these mechanisms so that interested parties will be able to decide if they wish to participate in the small wind program. The 2009 review will also evaluate whether or not the mechanisms are appropriate.

DayStar requests clarification that solar photovoltaic manufacturers will receive direct incentives. We stated that eligibility is limited to customers who pay the RPS surcharge, except in unusual circumstances. Thus, photovoltaic manufacturers generally would not be entitled to receive direct incentive payments, unless they are the customers of record at the location of the photovoltaic device.[13] DayStar and other manufacturers and installers might participate directly and receive payments if they obtain payment assignments from eligible customers.

GENERAL DISCUSSION

The September, 2004 Order describes the Customer-Sited Tier as a mechanism to ensure the continued and accelerated development in New York State of emerging technologies. As indicated in that Order and here, NYSERDA will develop and

[12] A similar expectation exists with respect to wind facilities.

[13] Only customers that pay the RPS Program surcharge are generally eligible to receive funding through the Customer-Sited Tier.

implement programs with guidance from Staff and the input of interested parties that are designed to maximize the installation and operation of eligible technologies. Incentive programs, payment structures, and payment levels are to be designed to accomplish the following: reduce cost barriers to customers interested in installing renewable energy systems; encourage reliable operation of installed systems; ensure that the incentive design structure is fair and reasonable; encourage properly-sized systems; provide equitable incentive levels between similar products; and progress toward a marketplace sustainable without incentives.

Because markets, technologies, and technology barriers vary, incentive programs and payment structures may also vary based on targeted market sector and/or specific renewable technology. This will allow for the most effective incentive payment designs to be adopted. For example, larger systems might be relatively more cost-effective for customers than smaller systems, so they might not need or receive the same incentive level percentage as smaller systems. Also, certain market sectors might qualify for higher incentives based on need or benefit.

To promote the initial installation and continued operation of the eligible technologies, a combination of capacity payments and/or performance-based payments may be used. NYSERDA may make capacity payments based on project milestones, such as delivery of system components, completion of system installation, and interconnection. There are various ways for NYSERDA to calculate capacity payments, including the system kW rating, a percentage of the installed cost, the forecasted energy production, other methods that meet the program design principles, or a combination of these factors. NYSERDA is authorized to cap or modify capacity payments when necessary to meet program principles and to ensure sufficient funds are available for future customers. Where incentives are primarily

capacity-based, incentives may also be paid for data submission to encourage installers to submit performance data.

Performance payments may be made after the system is installed and operational. NYSERDA should pay any performance-based production incentives for verifiable performance metrics over a sufficient period of time to demonstrate system robustness (e.g., up to five years). Performance metrics may include, but are not limited to, one of the following: kWh generated, capacity factor, availability factor, or other appropriate performance measurement.

We expect NYSERDA to design the programs to achieve the principles above and foster reasonably-priced, high-quality installations at appropriate sites that operate reliably and provide the customers with the benefits they expect. Specific design elements may include minimum qualifications for installers, system design reviews, and system inspections. The Operating Plan to be developed by NYSERDA will provide the details of the various programs for the Customer-Sited Tier consistent with the principles established in the general discussion in this Order

CONCLUSION

In accordance with the discussion contained herein, NYSERDA, after consultation with Staff, is authorized to implement and fund RPS Program Customer-Sited Tier solicitations through the end of 2009.

With respect to the specific issues raised in the Notice and comments of the parties, we conclude and require that:

- the overall funding target for Customer-Sited Tier technologies (exclusive of administrative fees) will be set at $45 million through 2009;

- Customer-Sited Tier RPS Program annual funding allocations from available funds will be set through 2009 at 30.7% for solar photovoltaic generation, 10% for small wind, 24.9% for fuel cells, 24,4% for anaerobic digestion systems, and 10% (plus funds

remaining from prior years) for discretionary purposes;

- unused funding for the eligible technologies will be assigned at the end of each year to the discretionary category, which NYSERDA, in consultation with Staff, may distribute the following year to eligible technologies on an as needed basis;

- buy-down incentives for solar and small wind projects, similar to the incentives used in the System Benefits Charge program administered by NYSERDA, will be allowed;

- buy-down and performance-based incentives, along with competitive solicitations, will be allowed for fuel cell projects;

- NYSERDA, in consultation with Staff, shall evaluate the effectiveness of the individual Customer-Sited Tier programs and modify them as necessary to meet changing market needs, except that any proposed changes in the overall funding allocations will require our approval;

- the 300 kW size limitation on small wind projects eligible for the Customer-Sited Tier will be removed and replaced with a requirement that allows Customer-Sited Tier projects as large as necessary to meet the load at the customer's meter, and this standard will apply to all the other eligible technologies;

- NYSERDA, in consultation with Staff, shall develop a Customer-Sited Tier Operating Plan that defines the specific Customer-Sited Tier Programs to be implemented through at least 2009, the expected funding levels within each program, the methods of payments to be made, when solicitations will begin, and other pertinent matters. It should reflect the decisions and guidance of this Order, as well as of our April 2005 and September 2004 Orders; and

- solicitations for Customer-Sited Tier resources shall commence once NYSERDA has completed its Operating Plan and other associated work.

The Commission orders:

1. Solicitations through 2009 are authorized for Customer-Sited Tier Resources in the RPS Program, subject to the discussion in the body of this Order.

2. The Customer-Sited Tier portion of the RPS Program shall be implemented and funded in accordance with discussion in the body of this Order.

3. This proceeding is continued.

By the Commission,

(SIGNED) JACLYN A. BRILLING
Secretary

ELIGIBLE ELECTRIC GENERATION TECHNOLOGIES			
MAIN TIER			
CATEGORY	**SUB-CATEGORIES**	**FUEL TECHNOLOGIES**	**REQUIREMENTS**
Biogas			Can be used in: reciprocating or internal combustion machines; combined heat & power applications; or co-firing applications with existing fossil-fuels, but only the electricity generated from biogas made from eligible biomass is acceptable.
	Landfill gas	Direct combustion	
	Sewage	Anaerobic digestion	
	Manure	Anaerobic digestion	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 & Resources Guide* developed by the NYS Department of Agriculture and Markets and the NYS Soil and Water Conservation Committee.
	Agricultural residues (other than manure)	Anaerobic digestion	
	Syngas	Gasification of biomass	Where adulaterated biomass is used to make biogas, feedstocks that are not source separated may be used if they come from NYSDEC-permitted solid waste facilities that pay for NYSDEC-provided monitors to ensure that the biomass feedstocks are consistently within their facility permits and conditions.
Biomass	Direct combustion	Direct combustion	Can be used in: reciprocating or internal combustion machines; combined heat & power applications; or co-firing applications with existing fossil-fuels, but only the portion of the electricity generated from the biogas made from eligible biomass is acceptable.

MAIN TIER (CONTINUED)			
CATEGORY	**SUB-CATEGORIES**	**FUEL TECHNOLOGIES**	**REQUIREMENTS**
Liquid Biofuel			Can be used in: reciprocating or internal combustion machines; combined heat & power applications; or co-firing applications with existing fossil-fuels, but only the portion of the electricity generated from liquid biofuel made from eligible biomass is acceptable. Where adulterated biomass is used to make liquid biofuel, feedstocks that are not source separated may be used if they come from NYSDEC-permitted solid waste facilities that pay for NYSDEC-provided monitors to ensure that the biomass feedstocks are consistently within their facility permits and conditions.
	Ethanol	Liquification of biomass through acid or enzymatic hydrolysis	
	Biodiesel, Methanol	Esterfication of biomass	
	Bio-oil	Thermochemical pyrolysis of biomass	
Fuel Cells			
	Solid Oxide (SOFC)		
	Molten Carbonate (MCFC)		
	Proton Exchange Membrane (PEM)		
	Phosphoric Acid (PAFC)		
Solar	Photovoltaics		
Hydroelectric			
	Upgrades		No new storage impoundment. Eligibility limited to the incremental production of the upgrade.
	New Low-Impact Run-of-River		Capacity limited to 30 MW or less, with no new storage impoundment.
Ocean Thermal, Wave, or Tidal Energy			
	Tidal Turbine		
	Ocean Wave Turbine		
	Ocean Current Wave Turbine		
	Ocean Thermal		
	Pumped Storage Hydro (Tidal Powered)l		
Wind	Wind Turbines		

CUSTOMER-SITED TIER			
CATEGORY	**SUB-CATEGORIES**	**FUEL TECHNOLOGIES**	**REQUIREMENTS**
Solar	Photovoltaics		
Fuel Cells			
	Solid Oxide (SOFC)		
	Molten Carbonate (MCFC)		
	Proton Exchange Membrane (PEM)		
	Phosphoric Acid (PAFC)		
Biogas			Can be used in: reciprocating or internal combustion machines; combined heat & power applications; or co-firing applications with existing fossil-fuels, but only the electricity generated from biogas made from eligible biomass is acceptable.
	Manure	Anaerobic digestion	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 & Resources Guide* developed by the NYS Department of Agriculture and Markets and the NYS Soil and Water Conservation Committee.
	Agricultural residues (other than manure)	Anaerobic digestion	

MAINTENANCE RESOURCES			
CATEGORY	**SUB-CATEGORIES**	**FUEL TECHNOLOGIES**	**REQUIREMENTS**
Hydroelectric	Run-of-River		5 MW or less
Wind	Wind Turbines		
Biomass	Direct Combustion		

Definitions 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.