

**VIA AIRBORNE EXPRESS**

September 26, 2003

Honorable Jaclyn A. Brillling  
Acting Secretary  
State of New York  
Public Service Commission  
Three Empire State Plaza, 19th Floor  
Albany, New York 12223

Re: Case 03-E-0188 - Proceeding on the Motion of the Commission  
Regarding a Retail Renewable Portfolio Standard

**INITIAL COMMENTS OF JOINT UTILITIES**

Dear Secretary Brillling:

Pursuant to the protocols established by ALJ Eleanor Stein in this proceeding, enclosed please find for filing an original and ten copies of the Initial Comments submitted on behalf 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 (collectively the "Joint Utilities").

Copies of these comments were served via e-mail today on the RPS Server-subscribed parties in this proceeding, including ALJ Stein. In addition, copies have been served via U.S. Mail on all Active Parties to this proceeding identified on the Commission's website.

Kindly acknowledge receipt of this filing by date-stamping as received the enclosed duplicate copy of this letter and returning it in the enclosed, self-addressed envelope.

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Hon. Jaclyn A. Brillling  
September 26, 2003

Respectfully submitted,

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**STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION**

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**PROCEEDING ON THE MOTION OF THE** :  
**COMMISSION REGARDING A RETAIL** : **CASE NO. 03-E-0188**  
**RENEWABLE PORTFOLIO STANDARD** :  
: :  
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**INITIAL COMMENTS OF JOINT UTILITIES**

**Dated: September 26, 2003**

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**STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION**

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**PROCEEDING ON THE MOTION OF THE** :  
**COMMISSION REGARDING A RETAIL** :  
**RENEWABLE PORTFOLIO STANDARD** : **CASE NO. 03-E-0188**  
: :  
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**INITIAL COMMENTS OF JOINT UTILITIES**

**INTRODUCTION**

These comments ("Initial Comments") are submitted on behalf of Consolidated Edison Company of New York, Inc. ("Con Edison"), New York State Electric & Gas Corporation ("NYSEG"), Orange and Rockland Utilities, Inc. ("O&R"), Niagara Mohawk Power Corporation ("Niagara Mohawk"), and Rochester Gas and Electric Corporation ("RG&E") (collectively, the "Joint Utilities")<sup>1</sup> in response to the Ruling Establishing Comment Procedures<sup>2</sup> and the Ruling Granting, in Part, Motions to Amend the Comment Schedule.<sup>3</sup> A summary of the complete procedural history of this proceeding is set forth in Appendix "A".

Central Hudson Gas & Electric Corporation ("Central Hudson") joins in and supports Section I (insofar as stating that reliability must be the paramount regulatory objective), Sections II (A) and (B), Section VI, and Section VII of these Initial Comments. Central Hudson will be submitting individual comments.

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<sup>1</sup> Several utilities have previously filed individual company comments. Consistent with the *Ruling Establishing Comment Procedures* (fn. 2 *infra*), the Joint Utilities have attempted to avoid repeating arguments made in these other filings.

<sup>2</sup> Case 03-E-0188 — Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, *Ruling Establishing Comment Procedures* (issued June 19, 2003) ("June 19, 2003 Ruling").

<sup>3</sup> Case 03-E-0188 — Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, *Ruling Granting, in Part, Motions to Amend the Comment Schedule* (issued August 18, 2003) ("August 18, 2003 Ruling").

The State of New York Public Service Commission ("Commission") instituted this proceeding<sup>4</sup> to develop and implement a Renewable Portfolio Standard ("RPS") for electric energy retailed in New York State. The Joint Utilities support the efficient use of energy and natural resources to protect and enhance the environment, economy and health of New York State and its citizens. To these ends, the Joint Utilities have been active participants in this proceeding to design an RPS program. The Joint Utilities believe that an RPS that is designed and implemented consistent with the comments contained herein can achieve the important policy goals of controlling costs to consumers, improving environmental quality, supporting fuel diversity and system reliability, and minimizing inconsistencies with retail and wholesale electricity markets in New York State and regionally.

The Joint Utilities have limited these Initial Comments to the most appropriate method to implement an RPS program. As described in these Initial Comments, the Joint Utilities recommend the adoption of a Central Procurement Model. The Central Procurement Model is not dependent upon any specific target level of renewable generation, and can therefore be applied to virtually any anticipated range of RPS targets. The method of commercializing new renewable resources that is recommended herein can be applied to essentially any quantity of new renewable generation.

In addition to presenting a proposed Central Procurement Model, and within the framework of the proposed Central Procurement Model, these Initial Comments also address the baseline measure of existing renewable resources, the propriety of tiers, the necessity for

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<sup>4</sup> Case 03-E-0188 — Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, *Order Instituting Proceeding* (issued February 19, 2003) ("Instituting Order").

certificates<sup>5</sup> trading, and the absence of any need for contracting standards. The Joint Utilities also address the RPS cost studies prepared by various parties and a methodology for full cost recovery by regulated utilities.

### **SUMMARY**

As discussed in Section I hereafter, the Joint Utilities believe that, while all the Working Objectives developed in this proceeding are important, the reliability of the State's transmission system should be recognized as paramount. Without it, other Working Objectives may not be achievable. The Joint Utilities recommend that a sensible balancing of the other Working Objectives be undertaken.

As detailed in Section II hereafter, the Joint Utilities believe that the Central Procurement Model is preferable to the Individual Compliance Model and should be adopted as the RPS implementation mechanism. The Central Procurement Model better maximizes value, minimizes cost, assures fairness and promotes other important benefits as compared to the Individual Compliance Model. Perhaps most importantly, it affords maximum flexibility to the Commission in its administration of the RPS, allowing for adjustments and corrections, where appropriate, in the event of future technology and economic developments or other changed conditions. The Joint Utilities describe herein a specific approach to the Central Procurement Model: the Commission would retain oversight over the RPS and establish guidelines regarding its implementation, and a Commission designee, such as the New York Independent System Operator ("NYISO"), pursuant to agreement with the Commission, would administer a certificates market in accordance with

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<sup>5</sup> These Initial Comments utilize the term "certificates," in lieu of the term "renewable energy credits," or RECs, which has been used informally in this proceeding. We prefer the term "certificates" because it is used in both New England and PJM to represent all the attributes associated with one MWh of energy. It thus implies an interest in regional compatibility, which the Joint Utilities favor. In contrast, we understand that "REC" is a specific type of credit that is sometimes used (*e.g.*, in Texas) to refer to the situation in which credits are granted only to renewable resources.

such guidelines. The Joint Utilities' suggested approach would permit renewable resource generators to obtain financing of their projects and achieve the maximum spreading of costs among New York State consumers, thereby reducing RPS per-unit costs.

In Section III the Joint Utilities discuss the issue of eligibility, and propose a baseline that contemplates participation by a large, diverse group of resources. The Joint Utilities also discuss the importance of expansive and flexible eligibility criteria, so that competition and energy diversity can be maximized while RPS goals are met and costs are minimized. Qualifying renewable resources should include "imports" and upgrades or additions to existing qualifying resources. Because of the associated costs and administrative complexity, the Joint Utilities recommend against adoption of any tier system.

Section IV sets forth the Joint Utilities' endorsement of a certificates trading system that would allow imports and exports and be compatible with other regions. A market-based trading system is important to assure that the correct price signals are sent to renewable resource generators for the management of their costs, which will help to mitigate RPS premium costs that otherwise would be borne by consumers. Compatibility with other regions would minimize RPS start-up costs and facilitate the coordination of certificates tracking and verification in New York and elsewhere. Allowing imports and exports would help reduce overall RPS costs and would recognize that the environmental and other benefits are regional.

As described in Section V, mandatory power purchase agreements are not a part of the Central Procurement Model. There is thus no need to establish contracting standards. To the extent parties enter into bilateral agreements for the purchase and sale of certificates, the Joint Utilities also believe that no Commission-prescribed contracting standards are necessary for these arrangements.

As discussed in Section VI, two analyses — one by upstate utilities and one by the State of New York Department of Public Service ("DPS") Staff and the New York State Energy Research and Development Authority ("NYSERDA") — have been developed in this proceeding aimed at quantifying RPS costs. Significant differences exist between them. The Joint Utilities believe that on-going cost analyses should be performed in this proceeding as the RPS is developed.

Finally, Section VII discusses the Joint Utilities' methodology for ensuring full cost recovery for all costs associated with implementation of an RPS.

## **DISCUSSION**

### **I. WORKING TARGET AND OBJECTIVES**

In the June 19, 2003 Ruling, ALJ Stein endorsed a Working Target and revised Working Objectives. The June 19, 2003 Ruling reflects a Working Target that by 2013 at least 25% of the electricity retailed in New York State will be generated from renewable resources. The Joint Utilities will not be addressing the merits of a particular target goal in these Initial Comments.<sup>6</sup>

The Working Objectives reflect revisions to the objectives ALJ Stein initially developed and discussed informally with the parties. In her May 2, 2003 Status Report to Chairman William M. Flynn, ALJ Stein stated that

[t]he purpose of defining objectives reflects that an RPS can be crafted in any number of ways depending upon what the state is trying to achieve. By defining a working set of objectives, based upon parties' own comments and with the parties' contributions, we create a yardstick to measure the policy choices.<sup>7</sup>

The revised Working Objectives appear to be comprehensive and, to that extent, can be said to provide a reasonable "yardstick" related to the formulation of an RPS. But they should be

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<sup>6</sup> As discussed in Sections II (B) (9) and II (C) (2), any RPS program should flexibly provide for the periodic evaluation of forecasted and/or specified annual, incremental target goals for renewable resources, and should appropriately reflect changed economic circumstances or differences between experience and assumptions.

<sup>7</sup> Status Report to William M. Flynn, Chairman from Eleanor Stein, Administrative Law Judge, dated May 2, 2003 ("Status Report"), *mimeo* p. 2.

clarified, so their usefulness can be maximized. The Joint Utilities have two recommendations in this regard.

First, the Joint Utilities firmly believe that reliability of the State's transmission system, which is subsumed within Working Objective 2 ("Generation Diversity"), should be recognized as the paramount policy consideration in this proceeding. Since before the Competitive Opportunities Proceeding, which commenced in 1993,<sup>8</sup> the Commission has clearly and emphatically enunciated its desire to ensure system reliability in the State of New York. The NYISO similarly has expressed its strong commitment to and desire for ensuring system reliability in its letter of June 9, 2003 to ALJ Stein in response to Multiple Intervenors' *Motion for Schedule Amendment and a Meeting on Impacts on System Reliability* ("NYISO Letter"), stating that the "reliability implications of an RPS, both positive and negative, should be addressed."<sup>9</sup> The New York State Reliability Council ("NYSRC") has stated that "the design of the [RPS] may have significant impacts on the reliability of the New York State bulk power system," and has urged the Commission to "ensure that the design adopted is consistent with, and preferably enhances, the continued reliability of the New York State bulk power system."<sup>10</sup> The NYISO has specifically recommended that careful evaluation be made of the impacts of interconnected renewable resources on capacity reserves, transmission system design, and transmission operations.<sup>11</sup> In recognition of the importance of reliability matters, the NYISO has commenced the design of a

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<sup>8</sup> Case 93-M-0229, *renumbered*, Case 94-E-0952.

<sup>9</sup> NYISO Letter, p. 1.

<sup>10</sup> NYISO Letters dated August 20, 2003, p. 1 and September 8, 2003, p. 1.

<sup>11</sup> NYISO Letter dated September 8, 2003, pp. 2-3.

study to evaluate the effects of intermittent generating resources<sup>12</sup> on system operation and reliability.

The Joint Utilities believe that a thorough examination should be undertaken of the impacts of the RPS on transmission system reliability. The results of such an examination need to be studied and considered in the formulation of the RPS. If the NYISO can undertake such an examination, then the NYISO results can be evaluated by the Commission. If the NYISO cannot undertake such an examination, then the Commission should direct that such an examination be undertaken in this proceeding.

Without assuring appropriate system reliability, the other Working Objectives may not be realized to the extent of their full potential. Furthermore, if sufficient reliability, at a reasonable cost and expense, is not properly addressed, RPS-necessitated transmission system operating requirements could have a cascading negative impact by deterring traditional needed generation from being constructed because of potential uncertainty regarding these requirements and the potentially adverse impacts of renewable generation resources on reliability, notwithstanding specified operating requirements. As a result, the Commission, by prematurely adopting an RPS, could undermine full achievement of the goals expressed in Working Objectives 1 ("New York's Environment"), 2 ("Generation Diversity"), 3 ("Economic Benefits"), and 4 ("Equity and Economic Efficiency"). Accordingly, although the safe, reliable, and cost-effective operation of the State's transmission system is a critical issue to the Commission, the NYISO, and the NYSRC, the listing of reliability as merely one of many objectives, without any recognition of its paramount importance, should be rectified.

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<sup>12</sup> Intermittent generating resources are resources that cannot produce energy "on-demand," but produce energy only when environmental conditions are favorable.

Second, the Joint Utilities recommend that a sensible balancing be made of the remaining Working Objectives, in order to assure that none are sacrificed at the expense of the others. For example, the accomplishment of Working Objectives 1 ("New York's Environment") and 3 ("Economic Benefits") clearly require consideration of Working Objective 4 ("Equity and Economic Efficiency").

In summary, the Joint Utilities recommend that the safe, reliable, and cost-effective operation of the State's transmission system be established as the primary Working Objective, and that a sensible balancing be undertaken with respect to the remaining Working Objectives.

## **II. CENTRAL PROCUREMENT MODEL**

Two general models have emerged in this proceeding — the Individual Compliance Model and the Central Procurement Model.<sup>13</sup> The Individual Compliance Model would require each Load Serving Entity ("LSE") to make individualized arrangements to provide for the delivery of a specified portion of an overall, State-determined RPS requirement. The LSE, presumably, could meet its obligations through bilateral contracts with eligible renewable generation facilities. Alternatively, assuming that a certificates trading market is developed, an LSE would also have the option of utilizing purchases from a centralized, yet to be developed statewide market to meet all or part of its obligations.<sup>14</sup>

In contrast to the Individual Compliance Model, the Central Procurement Model would establish an overall RPS "target" for the State, set up a mechanism for paying the "eligible"

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<sup>13</sup> Neither model should prevent New York State customers from also participating in "green marketing" programs, such as "Catch the Wind," should certain customers wish to purchase additional green energy products.

<sup>14</sup> In addition, an Alternative Compliance Mechanism ("ACM") has been advocated by some parties. The ACM would allow an LSE to make a payment to satisfy its obligations (in the event of market failure, for example). Additionally, the ACM would require the LSE to make the payment if it could not satisfy its obligation due to the failure of a project with which it had entered into a firm delivery contract. The Joint Utilities do not support an ACM for the RPS program.

renewable resources the appropriate premiums for the renewable power they produce, and then fund those payments through a collection mechanism applied to all KWhs delivered.

In this Section II, the Joint Utilities will discuss in greater detail the recommended Central Procurement Model, address its various advantages, and recommend a specific approach to the Central Procurement Model design. While we recognize that the Central Procurement Model can be implemented in various manners, we believe that our proposed design is preferable because of its harmony with existing market structures, its cost-mitigating features, and its compatibility with a competitive retail model. The Joint Utilities believe, however, that any reasonable approach to the implementation of a Central Procurement Model is superior to the Individual Compliance Model.

#### **A. Description of a Central Procurement Model**

As developed in Working Group 2, a Central Procurement Model has the following key attributes:

- (i) a focus on a single commodity (certificates) from new renewable resources or from expansions of existing qualifying resources;
- (ii) the incorporation of a planning horizon, to assist in meeting the required lead-times needed for the development and construction of renewable resources generation;
- (iii) the creation of a market process that would provide market price discovery of long run marginal costs for certificates from new renewable resources, while minimizing potential market power concerns ; and
- (iv) the accommodation of market entry and retail load switching for LSEs.

With respect to (iii) above, the Central Procurement Model contemplates that the funding of qualifying renewable resources would be accomplished through market-based payments for power and for extra-market-based payments for certificates representing the premiums above

market-based prices that are required by the renewable generation resources. Under the Central Procurement Model, the Commission, either through its customary designee (*i.e.*, the DPS), or through some other designee (such as the NYISO), would oversee the forecasting, procurement, trading, and payment of premiums on certificates that would be delivered during a future period to meet Commission-specified RPS target levels.

The key criteria of any designee would be that it be "qualified" (*i.e.*, knowledgeable about energy matters, including environmental considerations); that it be representative (*i.e.*, accountable for its decisions); that it be independent from market participants; that it have specific charter-like requirements to act in ways that seek to attain the RPS "targets" while minimizing costs to consumers; and that it be obliged to serve the public interest. While the Commission, drawing upon the resources and expertise of the DPS and NYSERDA, would clearly be qualified for this function, other options exist. As discussed hereafter, the Joint Utilities favor the NYISO as a designee, because of its independence and its experience in the administration of markets and in the collection and payment of associated sums of money. Furthermore, the NYISO has a market monitoring unit that could (i) assure that market power does not exist; or (ii) assure that market power is not being exercised; or, if exercised, (iii) seek appropriate remedies for the exercise of market power. Other designees could also be viable, provided they meet the above-stated criteria. Several existing state agencies and public authorities would be qualified to serve as designees, for example. Alternatively, a representative State body akin to an Article X Siting Board could be established, to assure broad representation of affected interests.

Under a Central Procurement Model, certificates would be solicited by the designated entity either via a Request for Proposals ("RFP") process or via an auction process. The Joint Utilities favor the use of auctions. Properly using auctions can provide price transparency, will

generate the lowest cost to meet the target renewable energy production, and will provide assurances to investors and developers of a future revenue stream to fund projects. Examples of successful auctions are prevalent. For example, the State of New Jersey holds a forward auction to purchase basic generation services ("BGS Auction"); the NYISO holds capacity auctions for all New York State electricity consumers.

Many auction designs could meet RPS objectives under a Central Procurement Model. One such design, a so-called Descending Clock Auction, is discussed hereafter. But whatever the specific design, any auction process would allow certificates to be procured for New York State consumers at the most competitive price. Such an auction process would not be to the exclusion of bilateral contracts for the purchase of certificates for hedging purposes. Holders of such purchased certificates would be able to participate in the centralized procurement process, just like renewable resource generators.

## **B. Advantages of a Central Procurement Model**

The Joint Utilities believe that a Central Procurement Model provides for an efficient, competitive certificates market that has the following benefits over an Individual Compliance Model:

1. Maximizes Value: The Central Procurement Model would maximize the value of the RPS program by having one entity coordinate all RPS certificate purchases, as opposed to having every LSE set up its own process. Benefiting smaller LSEs, central procurement would eliminate numerous duplicative costs associated with individual compliance. It would also promote price transparency and help to move the market to an efficient market clearing price. A basic intention of the proposed Central Procurement Model is to spread the costs of the certificates over the broadest base possible.

2. Assures Fairness to All Participants: The Central Procurement Model would allow small market participants access to certificates to the same extent as large LSEs and on the same cost terms. Thus, it would avoid undue barriers to entry for Energy Services Companies ("ESCOs"). This model would also ensure that all participants, large and small, would be treated equally on a load-weighted share basis. No entity, or group of entities, would be expected to carry a disproportionate share of the RPS compliance responsibility. A Central Procurement Model would ensure that all participating LSEs are treated equally and fairly, without resorting to penalties, enforcement mechanisms and expensive or time consuming oversight measures. It would also ensure that all renewable generators are treated equally and fairly while facilitating program implementation and improvements.

3. Equitably Matches Costs to all Loads: The benefits of an RPS would be realized by all residents and businesses in the State. The Central Procurement Model would ensure that all loads in the State pay their fair share, since the objective of the RPS is to benefit all New York State consumers. The Central Procurement Model makes it possible for all LSEs to have equal access to certificates on equivalent cost terms and assures equitable financial support by all New York State electricity consumers.

4. Minimizes Administrative Costs: One central procurement market, with one set of rules, would be more cost effective than a market where each LSE, regardless of size, is expected to issue RFPs, evaluate bids, negotiate contracts and manage those contracts. A Central Procurement Model would provide a significant benefit to smaller ESCOs and municipal utilities. In contrast, different rules for different groups would hinder the development of an efficient market and would add to administrative costs. Additionally, compliance filings by LSEs, the tracking of those filings

by the Commission, and other administrative tasks would not be necessary under a Central Procurement Model.

5. *Provides Lowest Cost Financing:* A Central Procurement Model would meet suppliers' credit requirements, provide suppliers assurances of payments, and result in all parties receiving the same treatment. It also would eliminate the need for each LSE to establish credit with each potential supplier.

6. *Avoids the Need for an Alternative Compliance Mechanism ("ACM"):* Since the Commission would oversee the Central Procurement Model processes, and administer the processes either directly or through a designee, the Commission would be in a position to detect and decide what to do if insufficient renewables are being built, or if they exist but their certificates are not being sold, or if premium prices are too high. This direct approach to assuring progress towards goals is preferable to an ACM. Implementation of a Central Procurement Model would avoid the administrative burdens and the costs associated with an ACM.

7. *Reduces the Risk of Market Power Abuses:* Under the Central Procurement Model, the existing market monitor could extend its responsibilities to ensure a competitive and efficient market for certificates. The NYISO has a market monitoring unit and expertise that could develop an automated monitoring procedure ("AMP") for this certificates market similar to the AMP used for the NYISO's energy markets. Price transparency would exist under the Central Procurement Model that cannot exist under an Individual Compliance Model.

8. *Avoids Load Shifting Financial Problems:* The Central Procurement Model would eliminate the financial problems associated with load shifting. Larger than expected load shifting

could leave an LSE exceptionally long or short of RPS resources if the Individual Compliance Model is used.<sup>15</sup>

9. *Affords Flexibility and Adaptability:* The Central Procurement Model would be extremely flexible and adaptable. It would still allow for bilateral transactions if desired by some LSEs for hedging purposes. LSEs that procure certificates in bilateral transactions could sell them as part of the auction process. The Central Procurement Model also would allow for a certificates trading system, just like the Individual Compliance Model. Formal price caps could be adopted, or the soliciting entity/administrator could determine prudent limits at the time of solicitation. The Central Procurement Model would allow the Commission to facilitate the development of sufficient renewable resources in New York State and would be flexible enough to handle disruptions in the process, such as inadequate construction or reliability issues that may arise once the program begins. With a Central Procurement Model, the Commission would be able to make appropriate adjustments to the annual glide path, taking into account resource availability and bid prices, as well as annual load growth. This flexibility afforded by a Central Procurement Model clearly is much more desirable than a process which forces commitments on individual LSEs that could be overly burdensome and locks in future targets that may not be realistic and which cannot be forecast with certainty.

10. *Avoids Imposition of Utility Electricity Procurement Obligations in Excess of Supply Requirements:* Adoption of an Individual Compliance Model could impose on utilities obligations to purchase "non-economic" resources without any criteria to guide those decisions and potentially place on them purchase obligations that extend beyond their obligations as LSEs or place them in excess supply situations as retail access continues to develop, because an LSE, using prudent

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<sup>15</sup> Evidence of existing retail load shifting between ESCOs can be tracked on the Commission website, "Electric Retail Migration Data," [http://www.dps.state.ny.us/Electric\\_RA\\_Migration.htm](http://www.dps.state.ny.us/Electric_RA_Migration.htm)

business judgment, may use long-term contracts for the purchase of certificates. The Central Procurement Model could accomplish the Commission's objectives in this proceeding without these potentially adverse effects.

**C. Joint Utilities' Proposed Central Procurement Model**

As described hereafter, the Central Procurement Model that the Joint Utilities support would establish the NYISO as the centralized entity that, acting pursuant to Commission-prescribed guidelines and to an agreement between the NYISO and the Commission, would solicit for the entire state-determined incremental RPS premium requirement and then charge each LSE based on an energy-weighted load-ratio share for these purchases. Certificates would follow the load. Financial settlements would take place after the renewable certificates are delivered and retired.

**1. NYISO As Recommended Designee**

The Central Procurement Model principles discussed herein would apply irrespective of whether the Commission or a designee is the soliciting entity. The Joint Utilities recommend, however, that while the Commission should retain oversight of the RPS, the NYISO should be the administrator of the certificates auction and the payment and collection processes described hereafter. The Commission would specify guidelines for the NYISO to observe in its implementation of these processes.

There are several reasons the Joint Utilities urge adoption of this approach:

1. Because the NYISO is the entity responsible for maintaining the reliability of the transmission grid and for operating existing energy markets, its administration of the certificates auction and the payment and collection processes is a natural extension of the NYISO's critical role in the energy markets in New York State.

Administration by the NYISO would assure that RPS costs are spread over all LSEs state-wide, thereby reducing the per-unit cost of the RPS program. All New York State LSEs — regulated investor-owned utilities, public authorities, municipal utilities, cooperatives and ESCOs — would participate in the RPS, ensuring that all New York State consumers who benefit from the RPS pay an equal share of its costs. It is uncertain the extent to which administration by an alternative designee would accomplish the same.

2. The NYISO has extensive experience with the administration of numerous markets (*i.e.*, energy, installed capacity, ancillary services, transmission congestion) and with market monitoring. The NYISO's administration of an RPS procurement process would harmonize nicely with the NYISO's administration of existing wholesale energy and capacity markets. There would be no need to create a separate market operating outside the bounds of these wholesale markets. Because alternative Central Procurement Model designs, in contrast, may require the creation of a new entity or new units within existing entities to administer a certificates procurement mechanism, the proposed NYISO approach would be more cost-effective.
3. LSEs are already accustomed to, and are set up for, making payments to the NYISO based upon load and a \$/MWh fee. Moreover, the NYISO already has in place mechanisms for the collection of payments from an array of market participants. Again, because alternative Central Procurement Model approaches may require the creation of a new entity or new units within existing entities to

perform these functions, the proposed NYISO approach would be more cost-effective.

Assuming the NYISO is the administrating entity, the NYISO's Open Access Transmission Tariff ("OATT") currently allows the NYISO to charge for participation in NYISO-administered markets. If certificates were to become another NYISO-administered market under the NYISO OATT, LSE certificates payments would provide market transparency by being recovered either in a line item in Rate Schedule 1 uplift charges or in a new Rate Schedule.

## **2. Auction Process**

Under the proposed Central Procurement Model, within three months ahead of a centralized auction described in detail hereafter, or within some other reasonable time frame, the Commission would issue a two-year forward forecast of future incremental MWh resource requirements. The forecast would be of the first increment of MWhs required for each year of a designated time period; the quantity would be the same for each year within this time period. The designated forecast period should be of sufficient duration to afford suppliers a reliable revenue stream to support financing. The Joint Utilities believe that five years would be a sufficient forecast period. Thus, for example, in 2004 the Commission would specify the first increment of MWhs required to be met in each of the five years from 2006 to 2010. In 2005, the Commission would specify the second incremental renewable resource requirement to be met in each of the five years from 2007 to 2011. Appendix "B," entitled "Certificates Ladder," depicts how the incremental resource requirements will continue to increase even as the suppliers' five-year commitments end.

The NYISO would take the two-year forward forecast and conduct an annual centralized forward auction to solicit bid prices for qualified certificates that would be delivered for each year

of the specified five-year period. The certificates represent the renewable attributes associated with physical energy production; developers would recover the value of the energy through the various energy markets. As proposed, the centralized forward auction would be a Descending Clock Auction, which would establish a price that will attract excess certificates and continually decrease the price until the price corresponds to the quantity of certificates needed. In other words, each successive price decrease would result in suppliers of certificates withdrawing from the auction until the quantity of certificates from those suppliers who are willing to accept the auction price corresponds to the five-year commitment level established by the Commission or its designee. If the centralized forward auction does not elicit enough certificates to meet the requirements, then the NYISO, with Commission approval, can elect either to accept a reduced number of certificates for the five-year forward auction period, or to re-run the auction soliciting the same number of certificates and starting the auction at a higher price. From a cost perspective, flexibility in the number of certificates solicited would seem preferable. Particularly in the early periods, it may be desirable to allow future technologies to develop and improve rather than to adjust market price signals.

The two-year forecast, along with the five-year centralized forward auction, would be conducted annually. From a planning perspective, this design would establish a succession of rolling seven-year windows.

Additionally, a series of monthly forward “reconfiguration” auctions would be held among interested suppliers of certificates. These reconfiguration auctions would be held between the time of the five-year centralized forward auction and the start of the actual five-year period. The purpose of the reconfiguration auctions would be to allow suppliers to cover changes in their positions, *e.g.*, resulting from unit cancellations or project delays, that could impair their ability to

deliver in accordance with their obligations flowing from the five-year centralized forward auction. These forward reconfiguration auctions would continue to be conducted throughout the years for which certificates have been committed, and would allow suppliers to make timely adjustments and corrections with other suppliers who may be "long." The availability and price of certificates in these reconfiguration auctions would provide market intelligence that would also allow the Commission or the NYISO, with Commission approval, to make timely corrections and adjustments to subsequent RPS incremental targets in future centralized forward auctions.

To the extent that these forward-looking auctions do not fully meet suppliers' needs, an after-the-fact auction could also be held to allow certificate suppliers to true up any discrepancies between their previous sales of certificates in the five-year centralized forward auctions or in the reconfiguration auctions and their actual production of certificates. Such discrepancies could result from variations in the projected forced outage rates or in the availability of the subject renewable resource. This after-the-fact auction could be held shortly after the completion of the target year.

In terms of auction participants, both new renewable resources that eventually come into existence, and planned new renewable resources that are not yet fully developed, can participate in the auctions, provided that the resource owners meet guidelines established by the Commission and the NYISO for testing, credit, and security, as applicable. Specific auction activity rules governing the involvement of participants may also be necessary to prevent potential gaming situations. Such rules would likely include controlling (i) the rate at which auction prices would "tick down" (*i.e.*, decrease) until supply and demand are balanced; and (ii) the quantity of certificates from new renewable resources that each supplier could submit in each auction.

Following the auctions, the NYISO would advise the winning suppliers in writing of the quantity, delivery, and pricing terms. This written notice, supported by appropriate regulatory orders or tariffs, would suffice for suppliers to obtain the necessary financing to develop any new projects or expansions based on the certificate revenue stream. As is the case with other market auctions, neither the Commission nor the NYISO would take legal title to the certificates. Rather, the Commission or the NYISO would simply be the auction administrator pairing supply and demand.

The Joint Utilities believe that procurement for a five-year period that commences two-years forward would be sufficient to allow for the financing and development of new renewable generation. It also would allow for the future decreases in technology costs that may help reduce overall RPS costs. In addition, the rolling seven-year window, along with reconfiguration and after-the-fact auctions, would provide an opportunity for periodic Commission evaluations of the forecasted and/or specified annual RPS target levels, and thereby allow corrections and adjustments, where necessary, for policy purposes or based on facts or data that were unavailable at the time, such as current economic conditions, reliability or operating consequences of the RPS, national RPS legislation, real-time premium or market-place data, technological developments, or other factors.

### **3. Certificate Products**

Products that resource providers can bid into the auctions would include (i) certificates from qualifying renewable resources directly supplied by generators; and (ii) certificates from qualifying renewable resources under bilateral contracts supplied by the entity holding legal title to the certificates, whether an LSE or a third party. Voluntary bilateral transactions for the purchase of certificates are intended to be an integral part of the certificates market to permit LSEs to

procure their own certificates as a hedge against potentially higher market clearing prices in the centralized forward auctions.

The proposed design of the Central Procurement Model requires that all certificates to be solicited by the NYISO from qualifying renewable resources, including those reflected in a bilateral transaction, be bid into the annual centralized forward auction. This requirement assures market visibility and accurate price discovery. LSEs that procure certificates in a bilateral transaction could ride the Descending Clock Auction to the market-clearing price, ensuring their sale.

#### **4. Certificates Pricing and Payments**

The clearing price of the annual centralized forward auction, would set the \$/MWh price to be charged to all LSEs serving load during the term covered by the auction. Because of this, the \$/MWh pricing would not be impacted by any reconfiguration auctions. The clearing price is thus straightforward and known at least two years before the month in which the supply of certificates commences.

The LSEs would be billed after the certificates are produced and delivered. Revenue requirements would be established by the Commission or the NYISO (or some other designee) based upon:

- (i) the weighted average \$/MWh clearing price for certificates from suppliers in all of the five-year annual centralized auctions that include the month in which the certificates are delivered.
- (ii) the energy delivered to LSEs' customers in New York State during the billing period; and
- (iii) the indirect costs for the RPS (as discussed in Section VII).

LSEs, in turn, would pass through these costs to their respective retail customers on a current basis.

If, as discussed above, an LSE, acting as a supplier of certificates, commits its own bilaterally-procured certificates through the auction as a hedge against higher prices, it would in turn receive equal financial credits for any procurement charges from the NYISO at no incremental cost to the LSE.

In either case, an LSE would make payments to the NYISO based upon its MWh usage and the \$/MWh fee for the period, net of credits received for bilaterally-procured certificates. The LSEs would collect these payments from their customers each month and remit them to the NYISO.

Upon receipt of the payment by the LSEs, the NYISO would then remit payment to the suppliers of certificates. Payments for certificates thus would not be made at the time of the auction, but would instead be made no earlier than the month after the certificates have been produced by the supplier and delivered to the NYISO for assignment to LSEs.

The Central Procurement Model properly minimizes financial risk. Although suppliers of certificates still have the risk that they would not be paid for certificates they fail to deliver, they have the opportunity to cover any potential non-delivery through the reconfiguration and after-the-fact auctions. In addition, with a central entity operating the certificates market subject to rules for LSEs' creditworthiness, the risk of non-payment to suppliers is minimal. This will help to attract investment, ensure that RPS objectives are met and negate the need for the adoption of penalties or other measures, which could needlessly increase the overall costs of the RPS. At this time it does not appear to be necessary to include liquidated damages for suppliers who fail to meet their delivery obligations in the design of the Central Procurement Model, but that option should be kept available should experience demonstrate otherwise.

### **III. ELIGIBILITY**

In furtherance of the proposed Central Procurement Model, the Joint Utilities offer in this Section III an alternative baseline proposal designed to permit participation by a diverse group of renewable resources and to facilitate RPS program administration.<sup>16</sup>

The Joint Utilities also recommend in this Section III that the RPS be compatible with the ongoing efforts of the Commission to support a competitive marketplace. Competition among RPS resources can be achieved by following three general guidelines. First, a reasonable range of qualifying eligible resources should be selected as suppliers of qualifying certificates. A robust portfolio of renewable resources, including imports, will be most likely to achieve the objectives of the RPS at the most reasonable cost possible. Thus, the Joint Utilities generally endorse the list of renewable generation technologies distributed by DPS Staff in its letter dated March 17, 2003 ("March 17, 2003 Letter"), as discussed and modified during Working Group 1 ("Eligibility Working Group") sessions.<sup>17</sup> Second, the Joint Utilities urge the Commission to avoid tiers, set-asides or secondary incentives. Third, the Joint Utilities propose that certain existing renewable resources should continue to be allowed to participate in the competitive green market, but should not be authorized to be suppliers of qualifying certificates to the annual centralized forward auction under the proposed Central Procurement Model.

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<sup>16</sup> The Joint Utilities also believe that New York State authorities and other State governmental agencies should take a lead role in the implementation of the RPS program. This can be accomplished by the issuance of an executive order that requires such entities to purchase their electric energy requirements from renewable technologies. Under Executive Order No. 111, New York State governmental authorities and agencies are only required to purchase, by 2010, 20% of their energy needs from renewable resources. The Joint Utilities believe that state government and agencies should purchase a significantly higher percentage of their electric energy requirements from renewable resources. Such a requirement could be a significant step toward meeting the State's RPS goal.

<sup>17</sup> It should be noted that certain utilities would support an expanded list of eligible resources. Those resources are identified in prior individual company filings.

As a general matter, the Joint Utilities envision the success of the RPS program through a combination of resource adequacy, program clarity, administrative simplicity, and cost control. As detailed in Section VI, various factors interact with one another in the two cost studies submitted in this proceeding to produce the forecasts of premiums that customers would be expected to pay to support qualifying eligible resources under the RPS program. Some of these factors are effectively beyond our control in this proceeding: the current cost of technologies and how quickly those costs will drop over time, for example, or how receptive communities will be to the installation of particular facilities, or the cost to interconnect facilities at specific locations. Other factors are within our control: the design of the resource acquisition mechanism, the level of over-market price risk transferred from the renewable generator to the purchaser of certificates (or in the case of the DPS Staff/NYSERDA-sponsored cost study ("Staff Analysis"), as discussed in Section VI hereafter, the bundled power purchase agreement), the selection of resources determined to be eligible, acceptance of imports and deliverability criteria, and so forth.

Customers and others who wish to do so will be able to measure the cost of premiums. They will not, however, be able to make such a determination about the energy savings, because those savings will not be measurable. Inevitably, this will focus attention on the cost of the premiums.

More importantly, the intent of the RPS is to provide temporary market support for the development of renewable resources with minimal impact on end-use consumers. Although it is certainly more desirable that the premiums be offset with savings than not, it would be highly undesirable for the premiums to become permanent. The RPS should be designed, then, to decrease future dependence on premiums over time, to interrupt and intervene in the natural

market behaviors and incentives to the smallest degree necessary to achieve its goals, and to encourage a diverse base of renewable resources that is able to compete over the long term.

#### **A. The Baseline**

The Joint Utilities advocate the establishment of broadly defined resource eligibility criteria, including a baseline measure, and an equitable program that is easy to understand and implement. Resources included within the baseline measure should be limited to those renewable resources that are, or were, in operation (or have a start-up date within a pre-determined short-term timeframe) as of a date certain (*e.g.*, the date a Commission order adopting an RPS is issued).

In this regard, the Joint Utilities recognize the difficulty of achieving group consensus on the baseline issue, particularly given the large number of active participants in this proceeding. The Joint Utilities applaud the diligent efforts of DPS Staff to develop the 28,896,189 MWhs baseline that was proposed in conjunction with the April 29, 2003 Working Group 1 (Eligibility Working Group) meeting. If the *2002 State Energy Plan* forecast of load growth over the next ten years proves to be correct, this will produce a requirement for a 9.2% increase in generation from renewables over the next decade to achieve a 25% goal. The following is the specific "compromise proposal" presented by DPS Staff at this meeting:

For the purposes of setting an incremental target to reach the 25% goal, it will be assumed that the incremental target is 25% of projected statewide electricity usage in NYS in 2013 less a baseline of 28,896,189 MWhs. The collaborative will not make attribution as to the specific sources that make up the baseline. Any future adjustments to targets will be made in the context of designated 'eligible' resources without attribution back to the effect, if any, on the makeup of the baseline.<sup>18</sup>

This compromise proposal may be neither easy to understand nor easy to implement. The Joint Utilities fear the proposal will confuse consumers and program participants alike. Moreover,

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<sup>18</sup> Working Group 1 April 29, 2003 Meeting Notes (posted on the Commission web site).

the “compromise proposal” will be extremely difficult to implement since, as drafted, it is virtually impossible to determine whether or not a specific unit is “existing” or “new” and therefore eligible for participation in the RPS program as a supplier of certificates, or if the purchase of its certificates to meet the needs of the new RPS increment will result in a double counting of units. Accordingly, the Joint Utilities submit an alternative baseline proposal.

The Joint Utilities recommend, as originally proposed by DPS Staff's March 17, 2003 Letter, that a baseline of 29,650,404 MWh or 19.34% of 2001-2002 load, be approved. If the 2002 *State Energy Plan* forecast of load growth over the next ten years proves to be correct, this will produce a requirement for an 8.8% increase in renewable generation over the next decade to achieve a 25% goal. As also discussed by DPS Staff in its March 17, 2003 Letter, included in this baseline would be all biomass, fuel cell, hydro, solar, solid waste,<sup>19</sup> and wind resources operational during the period April 2001-March 2002, both within New York State and within regions outside New York State that provided renewable energy exports to New York State.

Setting a baseline in which all the individual contributing units can be explicitly identified and listed, as is the case with the Joint Utilities' proposed baseline, will make the qualifying suppliers of certificates in the RPS program transparent, reducing the potential for double counting. By specifically identifying and listing baseline units, participants will be able to ascertain which specific resources are eligible to supply qualifying certificates under the RPS program.

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<sup>19</sup> Including municipal solid waste in the baseline is fully compatible with the inclusion of landfill gas, which is produced from solid waste.

## B. Target Resource Eligibility

As set forth in *The Renewables Portfolio Standard – A Practical Guide*,<sup>20</sup> “[i]n deciding which renewables will be eligible to satisfy the RPS . . . policy makers need to match their goals with the characteristics of different renewable resources.”<sup>21</sup> Because the stated intent of the Commission’s RPS program is to promote a broad spectrum of Working Objectives’ goals — which range from environmental preservation to improved security and fuel supply diversification — the resources that must be considered “renewable” must similarly be broadly defined. According to the NARUC Guide, “[a]ll renewables have significant benefits in several environmental categories. This feature could argue for extending eligibility to every renewable type.”<sup>22</sup> Further, as noted in the NARUC Guide, “[i]f policy makers are interested in renewable energy to obtain related resource diversity benefits, they should define eligibility broadly.”<sup>23</sup>

Consistent with the Commission’s goals and the guidance provided by NARUC, the Joint Utilities propose that eligibility under the RPS be expansive and include a wide variety of renewable resources and renewable generation technologies. The renewable resources should include “imports” and upgrades or additions to existing resources currently in the proposed baseline.<sup>24</sup> As for renewable generation technologies, a very broad mix would maximize competition in the marketplace, maximize energy diversity, and potentially minimize the cost of

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<sup>20</sup> Nancy Rader and Scott Hempling, National Association of Regulatory Utility Commissioners, *The Renewables Portfolio Standard -- A Practical Guide* (2001) (“NARUC Guide”).

<sup>21</sup> NARUC Guide, p. 15.

<sup>22</sup> *Id.*

<sup>23</sup> *Id.* p. 16.

<sup>24</sup> For example, improvements in either efficiency or availability of existing New York State run-of-river hydro facilities will add to the overall MW production of the facilities, either by better enabling them to utilize the existing renewable resource or enabling them to utilize the renewable resource on a more consistent basis. Also, there are limited opportunities remaining in New York State for new hydro plant additions. If we consider the modernization and improvement of our existing fleet as acceptable options in the RPS, we have expanded our opportunities for better utilizing this renewable resource. Improvements would be measured in

the program to energy consumers. It is important to recognize that we are planning today for certificate acquisitions that will occur as many as ten years from now. As explained in Appendix "C", entitled "Forecasting Winners", we should design sufficient flexibility into the RPS program to allow for the possibility that the "best" portfolio of technologies eligible to provide qualifying certificates may prove to be somewhat different than what we now expect. Each technology should be evaluated by the Commission, or a designee, on the environmental attributes and economic efficiency of the technology as it emerges. In this way, new and marginal technologies would not be excluded by the RPS in future years, thus expanding the renewables supply and therefore potentially lowering costs. Such a broad generation technology mix would result in a secure and diverse, "eco-friendly" base of renewable generation that would position New York State to alleviate future over-dependence on natural gas and fossil fuels, in furtherance of Working Objectives 1 ("New York's Environment") and 2 ("Generation Diversity").

### **C. Tiers**

The Joint Utilities do not support the inclusion of a tier system under the proposed Central Procurement Model.<sup>25</sup> Tiers force policy to be set based on potentially inaccurate forecasts, such as forecasts of the change in costs and benefits of the advantaged technologies over time, forecasts of the costs and benefits of desirable alternative technologies, forecasts of the availability of materials, equipment and sites, and forecasts of favored geographic locations. Tiers increase both the costs and the complexity of any RPS program. Tier systems also adversely impact the ease

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terms of increased MWh generated per yearly water flow through the station in cubic feet per second compared to their baseline capability.

<sup>25</sup> The Joint Upstate Utilities cost study ("Utility Analysis") evaluated tiers, but, as noted in the study, the evaluated scenarios were not intended to endorse particular policy decisions. For example, two tiers were added to one scenario because this option had been extensively discussed within the Working Groups. It therefore seemed inappropriate to conduct an analysis without exploring the potential impacts of a version of the tiers concept.

with which an RPS program can be implemented and can unnecessarily duplicate RPS program incentives.

A tier system imposes today's priorities upon tomorrow's New York State, and either implicitly or explicitly locks in a value or ranking system, which may well be obsolete years before the end of the RPS program. The Joint Utilities oppose a tier system because it will likely result in artificial discrimination between different types of generation technologies. Depending on the tier design, the overall effectiveness of the RPS program may be compromised since some resources may receive more of a premium than is economically appropriate.

A tier system also unnecessarily increases costs and adds administrative complexity to an RPS program. Tiers essentially select and subsidize certain generation technologies that, without such subsidization, would presumably be too expensive to succeed in a competitive market. Tiers make the administration of a Central Procurement Model much more complex and expensive, and add an additional and unnecessary layer of oversight to the RPS program.<sup>26</sup>

Tier systems may also inappropriately duplicate existing incentives. For example, if tiers are proposed to encourage the development of renewable generation downstate, this will duplicate the energy and capacity market pricing that *already* encourages investment in such downstate facilities.<sup>27</sup> Also, NYSERDA funding, and State and federal tax credits, as well as other sources

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<sup>26</sup> This complexity manifests itself in different ways. A credit multiplier, for example, will increase the number of certificates that must be acquired in total to achieve the ultimate RPS target, and therefore the total cost to consumers to achieve that target. It will also make the number of certificates necessary to achieve the target unpredictable, since the incentive effect will matter only in the case of those facilities that win in the auctions.

<sup>27</sup> If generators receive the market clearing price for renewable premiums and the market clearing price from the energy market, they will have an incentive to locate their units where the value of both these revenue streams will be maximized: in downstate New York. The Utility Analysis demonstrates the effect of this behavior. With no additional siting incentive, renewable facilities tended to locate where the price of energy was highest, to the degree modeling constraints allowed. If tiers are designed specifically to pay an extra premium for renewable generation to locate downstate, if a Central Procurement Model is designed to pay all generators the market clearing price for their certificates, and if the LBMP market already offers a premium for such downstate locations, then the locational tier may pay downstate generators an excessive premium.

of support, are already available for emerging technologies. The American Wind Association published a paper last year that found: “Wind Energy currently receives a direct subsidy, the Production Tax Credit (“PTC”). The PTC provides a tax credit of 1.5 cents per kilowatt-hour (adjusted for inflation, currently 1.7 cents/kWh) to producers of electricity from wind energy.”<sup>28</sup> According to that paper, other “subsidies come in various forms, including payment for production, tax deductions, guarantees, and leasing of public lands at below-market rates. Subsidies can also be provided indirectly, for example, through federal research and development programs, and provisions in federal legislation and regulations.”<sup>29</sup> The American Wind Association cited a detailed 1993 study of energy subsidies by the Alliance to Save Energy, which concluded that in 1989 \$900 Million was channeled to all renewable energy sources, including wind.<sup>30</sup> It would be unnecessary to duplicate this assistance through an RPS program.

On the specific question of a so-called maintenance tier, the Joint Utilities believe that it would be very difficult to decide which units would and would not qualify for funding under such a tier. Most importantly, “free-ridership” is a compelling objection. Although a small number of renewable generators in the baseline might be kept from retirement were they to receive premiums, it seems likely that most of the renewable energy in the baseline would continue to be available through 2013 without the need for premium payments, as the generation which supplies such energy continues to rely on the existing wholesale market for revenues. These generators, much like existing non-renewable generators, are competitive today in the existing marketplace. It is unclear how we would distinguish such free-riders from units genuinely in need of premiums

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<sup>28</sup> “*The Most Frequently Asked Questions About Wind Energy*”, American Wind Association, in cooperation with the U.S. Department of Energy and the National Renewable Energy Laboratory, Copyright 2002, at page 25. See <http://www.awea.org/pubs/documents/FAQ2002%20-%20web.PDF>.

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

were New York State to pursue a maintenance tier. It is quite clear that the cost of energy to New York State consumers would rise unnecessarily to pay the free-rider premiums. A reasonable compromise resolution of this issue may lie in the voluntary green market, as discussed hereafter in Section IV (D).

For the reasons discussed above, the Joint Utilities do not support the inclusion of tiers under the proposed Central Procurement Model.

#### **IV. CERTIFICATES TRADING**

The *Summary of Working Group Discussions*<sup>31</sup> provides that “[t]he charge of Working Group Four was to devise a New York trading system to enable trading of [certificates] separately from energy contracts or transactions.”<sup>32</sup> The “appropriateness of a ‘renewable attributes trading’ system, and the components of any such system that might be developed,” is Threshold Issue Number 10 of the Instituting Order.<sup>33</sup>

As discussed hereafter,<sup>34</sup> the Joint Utilities share the view that the Commission should include a certificates trading system as part of a Central Procurement Model. Such a system should be compatible with any similar systems in place in neighboring regions, and should accommodate imports and exports. Further, the Commission should carefully consider existing New York State renewable initiatives (including the Environmental Disclosure Compliance

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<sup>31</sup> Case 03-E-0188 — Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, *Summary of Working Group Discussion*, issued by ALJ Stein on June 25, 2003.

<sup>32</sup> *Id.* at p. 8.

<sup>33</sup> Instituting Order p. 4.

<sup>34</sup> The Joint Utilities would note the pendency of *American Ref-Fuel Company, et al.*, Docket No. EL03-133-000 before the Federal Energy Regulatory Commission (“FERC”). In that case, FERC is being requested to rule that contracts under the Public Utility Regulatory Policies Act of 1978 (“PURPA”) do not convey to the purchasing utility any renewable energy credits or similar tradable certificates. In comments filed in that proceeding, Central Maine Power Company has argued that, under existing PURPA power purchase agreements, the energy and capacity being generated by the qualifying facility and sold to the utility must include any and all environmental attributes, including renewable energy credits, associated with such energy and capacity. *American Ref-Fuel Company, et al.*, Docket No. EL03-133-000, *Comments of Central Maine Power Company* dated July 21, 2003, p. 7. The Joint Utilities support this view.

Program), and determine the extent to which they should be incorporated in full, or as modified, in the proposed Central Procurement Model. Finally, given the lead-time necessary for the development of supporting hardware and infrastructure, including software, it is essential that a decision be made on the open issues related to the design and implementation of a certificate system. On this point, as part of the collaborative process Working Group 4 agreed that additional time would be useful to further the discussions on development of a certificates trading system. For Working Group 4's consideration, the Joint Utilities have provided as Appendix "D" a draft of a proposed PJM GATS program and an associated timeline.

#### **A. Need for Certificates Trading**

There was a consensus among the parties in this proceeding that the Commission should include a certificates trading system as a part of any RPS program. As noted in the *Summary of Working Group Discussions*, the parties agreed that “New York should move ahead and design a New York trading system so long as it is compatible with neighboring systems.”<sup>35</sup>

Professional industry groups and coalitions also agree that there is a need to include a certificates trading system as part of a renewables program. In a report entitled “Plugging In Renewable Energy: Grading The States,” the Union of Concerned Scientists also supports the use of tradable certificates to enable electricity suppliers to comply with an RPS program “at the lowest cost.”<sup>36</sup> Further, the NARUC Guide supports the use of certificates in an RPS program.<sup>37</sup>

According to both the Scientist Report and the NARUC Guide, tradable certificates reduce the costs of compliance with a renewables program and promote a competitive renewables

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<sup>35</sup> *Summary of Working Group Discussion* p. 9.

<sup>36</sup> “Plugging In Renewable Energy: Grading The States”, by Jeff Deyette, Steve Clemmer, and Deborah Donovan, Union of Concerned Scientists, May 2003 ( “Scientist Report”), p. 7.

<sup>37</sup> NARUC Guide, Chapter Six, at 55-71.

market.<sup>38</sup> The Scientist Report asserts that a “market-based approach [to price certificates] is designed to provide the greatest amount of clean power for the lowest price and create an ongoing incentive to drive costs down.”<sup>39</sup>

A certificates trading system may also be necessary to support voluntary green market programs, as discussed in Section IV (D) hereafter. Such a system would also provide a framework for future policy initiatives and would be compatible with the competitive policy structure supported by New York State.

Accordingly, based upon the consensus position of the parties to the RPS proceeding, as well as the recommendations of professional industry groups and coalitions, the Joint Utilities urge the Commission to adopt a certificates trading system as part of the proposed Central Procurement Model — and to do so sufficiently early such that the design of the Central Procurement Model can proceed and developers can rely on the system when financing their projects.

## **B. Compatibility with Neighboring Regions**

The consensus in the RPS proceeding was to establish a certificates trading system that is compatible with similar systems in neighboring regions, in the sense of issuing equivalent attribute certificates.<sup>40</sup> The importance of coordination and compatibility with neighboring regions’ systems was properly emphasized by the ALJ in this proceeding when she established Working Group 4 (“Regional Trading”).<sup>41</sup> The need for regional trading of certificates was subsequently reinforced by the ALJ when she issued the final version of the description of the tasks and agenda for Working Group 4 on May 5, 2003. This document was entitled “Regional Trading of Renewable Energy Credits – Working Group No. 4” and listed nine issues to be addressed in

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<sup>38</sup> *Id.* at 56; Scientist Report p. 7.

<sup>39</sup> Scientist Report p. 7.

<sup>40</sup> *Summary of Working Group Discussion*, pp. 8 and 9.

exploring options for implementing certificate trading. These issues focus on the need for coordination and compatibility with neighboring control areas.

According to the NARUC Guide, coordination of RPS compliance efforts with neighboring states on a regional basis is necessary because:

the market for electric generation is regional, and generators and retailers operate in more than one state. Without such compatibility and coordination, it will be difficult to properly track [certificates] among multi-state market participants. Additionally, the RPS will be vulnerable to double-counting, both intentional and unintentional. Last, regional coordination is necessary to verify retailers' claims regarding the attributes of their power products so that the same [certificate] is not used in two different states or regions, as could occur without a regional coordination effort.<sup>42</sup>

The existence of proposed federal legislation,<sup>43</sup> which includes a national RPS, also makes the need for a compatible regional certificates system all the more important. If a federal law instituting a national RPS is enacted, the New York certificates system will need to be compatible with the national RPS. Regional compatibility is a necessary and logical first step toward achieving national compatibility.

Further, the principle of cost efficiency dictates that a certificates trading system be regionally if not nationally compatible. If New York State develops a certificates trading system which is not compatible with neighboring regions, New York State would not be able to take advantage of existing computer systems already in place in those regions. Thus, the administrative cost of implementing New York State's certificates trading system would be unnecessarily increased. It is likely that taking advantage of these existing systems will also shorten

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<sup>41</sup> Letter to Active Parties dated April 11, 2003, from ALJ Stein.

<sup>42</sup> NARUC Guide, pp. 66-67.

<sup>43</sup> *S.14 and H.R.6, Energy Policy Act of 2003.*

implementation time and reduce the occurrence of errors and problems otherwise attributable to new and untested software.

In summary, to facilitate competitive regional markets and reduce administrative costs, the Joint Utilities believe that a New York State certificates system must be compatible with similar systems in neighboring regions. The Joint Utilities urge the Commission to so conclude. A compatible energy trading system facilitates the competitive regional renewables market clearly envisioned by the Commission as part of the RPS program.<sup>44</sup>

### **C. Allowance of Imports and Exports**

Integral to any certificates trading system that is compatible with neighboring regions are imports and exports. Without imports and exports, there can be no regional market for renewables. Further, the consensus position of the parties to this proceeding supports the inclusion of imported and exported certificates. The *Summary of Working Group Discussions* acknowledges the parties' agreement "that imports into New York should be allowed to be traded. As New York appears likely to be a net importer of renewables, there was consensus that eligible imports should be allowed to be traded here."<sup>45</sup> In addition, "[m]ost, but not all, parties concluded that the creation of a New York trading system accommodating imports and exports was critical."<sup>46</sup>

The principle of cost efficiency also dictates that imports and exports be included in any certificates trading system adopted as part of the New York State RPS program. The failure of the RPS program to accommodate imports and exports would lead to higher program costs.<sup>47</sup> This

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<sup>44</sup> Letter to Active Parties, dated April 11, 2003, from ALJ Stein.

<sup>45</sup> *Summary of Working Group Discussion* p. 9.

<sup>46</sup> *Id.*

<sup>47</sup> Exclusion of imports from the Utility Analysis was a simplifying assumption, and certainly not a statement of principle. The Joint Utilities agree, for example, that Canadian hydro might offer certificates at a lower premium than a New York State wind farm.

would be completely counter to the Working Objectives and, in particular, to Working Objectives 4 (“Equity and Economic Efficiency”) and 5 (“Competitive Neutrality”).<sup>48</sup>

Finally, the parties are in agreement that whether deliverability of energy should be required is a key issue to be decided by the Commission in its RPS policy statement. The ability of retailers to use imported certificates to meet the New York State RPS requirements without a deliverability requirement may be more, or may be less, expensive than if only certificates associated with energy actually delivered into New York State were eligible to meet the RPS targets. In addition, while meeting environmental and air quality goals may sometimes be limited to the larger air shed region without the imposition of a deliverability requirement, there is also the question whether an intermittent resource would sign a contract to deliver energy. Scheduling an intermittent resource in the day-ahead market and then failing to deliver in real-time could result in substantial economic losses to that intermittent resource. To date, these matters have not been carefully evaluated in the RPS proceeding.

For the reasons discussed above, the Commission should ensure that the RPS program adopted in New York State includes a regionally-compatible certificates trading system that allows for the importing and exporting of certificates from neighboring regions. On the question of deliverability, if an RPS is developed which allows the Commission or its designee to coordinate programs with other regions, deliverability is not necessary. If the region from which a renewable resource delivers certificates to New York State has an RPS system that allows for tracking the production of certificates in that region and verification of delivery of those certificates to an entity in New York State, then deliverability of energy with the certificates will not be necessary. However, if the other region does not have a compatible RPS system that allows New York State

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<sup>48</sup> June 19, 2003 Ruling, Revised Working Objectives at 3-4.

to verify and track the certificates, then deliverability may be necessary to verify and track the certificates produced outside of New York State. The Commission may find that under some circumstances, such as where another region is still in the process of developing its tracking system, legally binding attestations by entities producing and delivering certificates may suffice.

#### **D. Existing Certificate Programs**

The only source for over-market premiums today in New York State is a form of certificate available nationwide. Products or credits certified by the Center for Resource Solutions in San Francisco, California<sup>49</sup> are being sold by certified Green-e retail marketers or LSEs<sup>50</sup> in a number of utility service territories in New York State. Under all these programs, qualifying generators may sell their attributes directly to Green-e retail marketers or LSEs, who in turn sell them to retail customers as Green-e products or Tradable Renewable Credits ("TRCs").

Alternatively, qualifying generators may sell their attributes to wholesale marketers, who aggregate the attributes from one or more generators for resale to the retail marketers or LSEs as Green-e products or TRCs. In either case, Green-e products and TRCs are retired when they are sold to retail customers or upon their expiration date, whichever comes first.

As discussed in Section III (C), the Joint Utilities support continuation of the voluntary green market, both as a matter of policy and as a potential source of revenue for (i) renewable generators currently in the RPS baseline that now qualify for the Green-e program, and for (ii) new

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<sup>49</sup> For more information on the Center and its credit certification programs, see <http://www.green-e.org/>. The Green-e standard for electricity products sold in New York can be found at [http://www.green-e.org/ipp/standard\\_for\\_marketers.html](http://www.green-e.org/ipp/standard_for_marketers.html); for the requirements placed on the marketers themselves that includes a brief discussion of the Green-e environmental disclosure requirements and true-up period, see [http://www.green-e.org/ipp/marketer\\_requirements.html](http://www.green-e.org/ipp/marketer_requirements.html). For information about Tradable Renewable Credits (TRCs), which are a slightly different nationwide product certified by the Center that can also be sold in New York, see [http://www.green-e.org/ipp/trc\\_marketers.html](http://www.green-e.org/ipp/trc_marketers.html).

<sup>50</sup> A retail marketer may sell only the Green-e credits to the end-use retail customer, or an LSE may sell an end-use retail customer both energy and Green-e credits, or an LSE qualified to sell an end-use retail customer both products may sell a particular customer only one product or the other.

renewable generators. In order to make this possible, consideration must be given to the appropriate procedures and practices to be put into place in New York which will allow both the voluntary green market and the RPS to function effectively side by side without double-counting attributes, with appropriate product labeling and environmental disclosure, and without placing a discouraging administrative burden on market participants.

In New York State the current transfer of attributes (without the use of a certificate mechanism) is tracked as part of the Commission's Environmental Disclosure Compliance Program ("EDCP")<sup>51</sup> and its associated conversion transactions ("CTs"). Under the EDCP, all energy generated and sold in New York State energy markets is reported to the DPS for purposes of environmental disclosure reporting. Generators report bilateral transactions to the NYISO. The NYISO reports both bilateral transactions and spot market transactions to the DPS, while LSEs report load modifiers. It is assumed that each transaction has involved the sale and purchase of both the energy and its associated attributes from a particular generator: the attributes are not unbundled from the energy and separately sold.

After historical spot market sales are reported by the NYISO to the DPS, the DPS reports to each generator those attributes which may be used for CTs. LSEs may negotiate an exchange (or "conversion") of attributes with interested generators, should they wish to do so. This is the only point in the process where attributes may be unlinked from their energy source. As a rule, generators trade their "cleaner" attributes for the "less clean" characteristics of the average spot market profile. In the case of Green-e retail vendors, if such vendors inform the retail customers'

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<sup>51</sup> Case 94-E-0952 - In the Matter of Competitive Opportunities Regarding Electric Service, filed in C 93-M-0229, Opinion No. 98-19, *Opinion and Order Adopting Environmental Disclosure Requirements and Establishing a Tracking Mechanism* (issued and effective December 15, 1998).

LSE of the CTs, the certificate sales can be matched with equivalent CTs, ensuring consistent New York State environmental disclosure forms.

CTs cannot be based on bilateral transactions or load modifiers; conversions may only be based on spot market transactions. Money may or may not change hands as part of a CT when "cleaner" attributes are exchanged for "less clean" attributes because financial transactions are not tracked. The potential exists, however, for a market for CTs; indeed, this potential was one of the reasons to create the CT transaction concept in the first place. Finally, in the case of imports, deliverability of energy is a requirement: attributes alone cannot be imported.

As presently designed, the EDCP is not compatible with other regional market designs, which permit the transfer of certificates alone. In addition, it is unclear whether New York State wishes to permit trading systems for three different attribute mechanisms: Green-e credits, CTs, and New York State certificates. New York State thus would appear to have four options: (i) create a third form of New York State RPS certificates, in addition to Green-e credits and CTs; (ii) maintain CTs but replace Green-e credits with New York State RPS certificates; (iii) eliminate both Green-E credits and CTs, and have only New York State RPS certificates to serve all purposes (RPS, voluntary green retail products, and product conversion and environmental disclosure); or (iv) retain the existing configuration, and meet the needs of the voluntary green market with Green-e credits while meeting the needs of the RPS with bundled energy and CT arrangements.

Given the important role existing renewable energy initiatives have played in New York State, the Joint Utilities recommend that Working Group 4 be charged with evaluating the various options and making appropriate recommendations.

## **E. Certificates Banking and Borrowing**

One of the advantages of the Central Procurement Model is that it mitigates the need for banking and borrowing of certificates. This is because the purchase requirement is shifted from individual LSEs to a statewide level. A centralized solicitation process would make ramp rate adjustments possible. Reconfiguration and after-the-fact auctions would further reduce the risk of an insufficient statewide supply of certificates.

However, where suppliers have an excess or shortfall of certificates for any given year, the Central Procurement Model would permit them to utilize banking and borrowing of certificates to meet their commitments for a stated period. The Joint Utilities recommend that this period be one year in advance for banking and one year past for borrowing. The quantity of certificates to be banked or borrowed could be limited by rules developed by the Commission or its designee. For example, constraints may be placed on the ability to borrow more certificates than a generator is likely to produce in a given period. Suppliers could resell and repurchase such certificates in the reconfiguration and after-the-fact auctions, subject to appropriate rules to be developed by the Commission or its designee.

As discussed in Section II, the Central Procurement Model would also permit LSEs to enter into bilateral agreements to purchase certificates for hedging purposes. The LSE would then be required to bid those certificates into the central procurement auction.

Because many details would have to be developed in order to implement banking and borrowing, the Joint Utilities recommend that Working Group 4 be charged with adding certificate banking and borrowing to its scope of analysis.

## V. CONTRACTING STANDARDS

As discussed in Section II (A) above, under the Central Procurement Model the buying and selling of certificates would be conducted through a centralized market administered by an entity independent from market participants and/or through voluntary bilateral agreements. At this time, the Joint Utilities see no need for the development of contracting standards to govern voluntary bilateral agreements for the purchase of such certificates.

The Central Procurement Model does not contemplate that LSEs would be required to enter into long-term power purchase agreements. The Joint Utilities believe that any such requirement would be inconsistent with the energy markets in New York State and would, therefore, be inconsistent with Working Objectives 4 ("Equity and Economic Efficiency") and 5 ("Competitive Neutrality"). Long-term power purchase agreements may foster problems from conditions that could not be foreseen at the time of contract execution. Furthermore, reliable energy at a reasonable cost might be impacted negatively.

Certainly voluntary bilateral agreements between LSEs and generators for the purchase and sale of electricity are permitted under the Central Procurement Model. A generator of renewable resources would be permitted, but not required, to participate in the spot market administered by the NYISO, and LSEs would be permitted, but not required, to enter into long-term power purchase agreements for hedging purposes.

For these reasons, the Joint Utilities believe that the decision making processes and business strategies of LSEs, renewable resource providers, and the NYISO should not be restricted by Commission-mandated long-term power purchase agreements.

## **VI. COSTS AND BENEFITS**

The costs of implementing an RPS were estimated in an Initial Analysis performed by ICF Consulting on behalf of the Joint Upstate Utilities<sup>52</sup> (“Utility Analysis”), and in a Cost Study Report prepared by DPS Staff, NYSERDA, Sustainable Energy Advantage, LLC, and La Capra Associates (“Staff Analysis”).<sup>53</sup>

Both studies rely on the *2002 State Energy Plan* for projections of long-term load growth and energy sales. Both studies make similar assumptions as to the incremental growth in renewable power to be obtained between 2006 and 2013;<sup>54</sup> the Joint Upstate Utilities assumed 1% growth per year and DPS Staff assumed 0.94% growth per year.<sup>55</sup> Both studies assumed continuation of the existing federal production tax credit.<sup>56</sup>

As discussed hereafter, despite the similarities in the basic load projections and RPS “targets,” the studies differ in several respects.

### **A. Utility Analysis**

The intention of the Utility Analysis is to depict, from a system production perspective, the potential costs, cost savings, and emissions improvements that could result from funding commercialization of new renewable sources of generation. The premise of this perspective is that

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<sup>52</sup> The utilities sponsoring this study are Central Hudson, NYSEG, Niagara Mohawk and RG&E.

<sup>53</sup> The Joint Utilities are continuing discussions with DPS Staff related to the assumptions, methods, data sources and other aspects of the Staff Analysis.

<sup>54</sup> The Joint Upstate Utilities continued their study beyond 2013, to 2020, and, in the letter transmitting the PowerPoint summary of the Utility Analysis, also reported on the costs (and potential savings) after 2013 shown by carrying the analysis out beyond 2013.

<sup>55</sup> As noted by the Joint Utilities previously, the Utility Analysis assumed the 8% incremental new renewable growth criterion and the Staff 2013 phase-in target only for purposes of the Utility Analysis; the use of those criteria in the Utility Analysis does not imply any endorsement or acceptance of either the growth target or DPS Staff’s phase-in.

<sup>56</sup> DPS Staff’s Responses to Joint Utilities’ Question 24 confirm that DPS Staff’s position is that the RPS premium would be increased to offset the economic effect of termination of the federal PTC. Those costs were not included in the Staff Analysis (or in the Utility Analysis). If the federal tax credit terminates at some future date, and if the developers are presumed to “need” the level of financial returns assumed

allocation of the financial resources of consumers and businesses of the State for the purpose of aiding development of renewable generation is a societal choice among competing uses for the essentially private funds. Therefore, the most fundamental assessment of the costs and benefits of a decision must be made from a societal perspective.

The Utility Analysis was performed using ICF Consulting’s well-known electric power sector model, the Integrated Planning Model® (“IPM”).<sup>57</sup> IPM has a demonstrated record of extensive use by federal and state agencies for medium to long-term policy analyses.<sup>58</sup>

The Utility Analysis analyzed two different cases, both of which assumed technological improvements in the performance of renewables and improvements in capital and operating costs as compared to existing renewable resources. Two alternative sets of assumptions were used to characterize the availability of natural resources (specifically, wind) to "fuel" operation of the new renewable resources. The intention of the two cases studies was to “bound” the range of costs that could result from implementing an RPS having the “targets” identified in the Instituting Order.

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elsewhere in the analysis so that the loss of the tax credit is additive to the premium, the effect would be to increase the direct cost of the RPS.

<sup>57</sup> The Joint Upstate Utilities’ submission consists of a transmittal letter, a 63 page series of PowerPoint Slides entitled “Report of Initial Analysis of proposed New York RPS” (including Appendices) ("Report"), and five pages of spreadsheet summaries of certain model results. The study was called an Initial Analysis because there has been no consensus developed as to the design elements of a program (*e.g.*, level of “targets,” kinds or extent of “tiers,” restriction, or absence thereof, for geographical location, level of profit to be allowed to developers, *etc.*).

<sup>58</sup> The advantages of an integrated model are many:  
IPM provides true integration of wholesale power, system reliability, environmental constraints, fuel choice, transmission, capacity expansion, and all key operational elements of generators on the power grid in a linear optimization framework. The model utilizes a Windows™-based database platform and interface that captures a detailed representation of every electric boiler and generator in the . . . North American . . . regions. The fundamental logic behind the model determines the least-cost means of meeting electric generation energy and capacity requirements while complying with specified constraints including air pollution regulations, transmission constraints, and plant-specific operational constraints. The versatility of IPM allows users to specify which constraints to exercise and populate IPM with their own datasets.

See [www.icfconsulting.com/markets/energy/imp.asp](http://www.icfconsulting.com/markets/energy/imp.asp)

The first study case (“Scenario 1”) represents performance characteristics (costs and output) for renewables technologies and resource availability (wind resource characteristics) that the Joint Upstate Utilities believed were attainable with a high degree of likelihood. In this scenario, the Utility Analysis also specified that 5% of the incremental targets in Scenario 1 be met by solar PV and 5% by fuel cells, on the explicitly stated premise that it was plausible that New York State would establish “set asides” for those technologies. The second study case (“Scenario 2”) was developed by the Joint Upstate Utilities to reflect relatively more optimistic assumptions, relating primarily to future technological improvements, wind facility cost and performance data and wind resource availability.

Under both scenarios, all new renewable resources were assumed to be built in New York State.<sup>59</sup> It must be emphasized that the Joint Utilities strongly favor the inclusion of imports as eligible resources in the RPS program, as discussed in Section IV (C) above. However, in designing the parameters of the Utility Analysis, the Joint Upstate Utilities realized that it would be quite difficult to reliably model the larger regional market for certificates during the coming years in the time available. The possible adoption of a federal RPS, the possible strengthening of existing RPS requirements in other states and in Canadian provinces, and the uncertain draw upon renewable resources by the voluntary green market could combine and interact in a manner that makes the larger market hard to predict. Further, it is far from clear to what extent renewable resources built outside New York State will find the New York State RPS their most profitable or convenient market, or to what extent developers who build in New York State will find it desirable to sell their output either outside New York State or on the voluntary market rather than in the

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<sup>59</sup> Details of the assumptions made in the Utility Analysis are summarized at pp. 9-16 and 49-56 of the Report.

RPS. Accordingly, the Utility Analysis simply assumed under both Scenario 1 and Scenario 2 that all RPS resources would be constructed in New York State.

Under each scenario, the Utility Analysis calculated the costs of an RPS in two ways: direct RPS premiums, and total state-wide production costs including recognizing savings in fuel costs resulting from reductions in in-state generation. The results of each of these ways were presented for the 2006 - 2013 time period and for the 2006 - 2020 time period. The Utility Analysis places reliance upon the results reported for the 2006 - 2020 time period and specifically states that the results through 2013 had been calculated and reported for the specific and limited purpose of facilitating comparison to the Staff Analysis calculations for this time period.<sup>60</sup> The 2020 date represents a time period sufficiently long to capture most of the costs, on a net present value basis,<sup>61</sup> of the 2006 through 2013 incremental RPS “target.” In calculating the costs through 2020, the Utility Analysis assumed continuation of the 25% RPS (incremental 8%) “target,” which had the effect of continuing the program through the study period.

The Utility Analysis found that under Scenario 1, the direct, out-of-pocket, costs to consumers and businesses in New York of the RPS premiums required to “incentivize” the production of 14 million KWh by 2013 from new renewable generation, and continue at the incremental 8% of in-state sales thereafter, could exceed \$6 Billion in year 2000 dollars by 2020. If the more optimistic assumptions of Scenario 2 prevail, the direct RPS premium costs would be reduced to about \$2 Billion in year 2000 dollars by 2020.<sup>62</sup>

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<sup>60</sup> See Joint Upstate Utilities July 27, 2003 transmittal letter.

<sup>61</sup> The Utility Analysis' IPM modeling assumed 20-year book lives for the renewables. Thus, the analysis should have extended through 2033 to capture the full costs of the last cohort of facilities added in 2013. The additional cost of carrying out the modeling runs to 2033 was judged to be unnecessary, particularly in light of the uncertainties as to loads and resources that far into the future, as discussed.

<sup>62</sup> Both the \$6 Billion and the \$2 Billion amounts represent the net present value of the revenues that would be paid by New York State consumers as premiums to the new renewable generators between 2006 and 2020.

Slide 27 of the Utility Analysis illustrates a vital distinction between these two scenario results: one produced rising, and the other declining, spot certificate prices depending on the input assumptions regarding advancements in the costs and performance of available renewable technologies. Under Scenario 1, developers assume that in the future they will compete against more costly renewable resources for premiums as growth in certificate demand outpaces the cost and performance of available renewable technologies, thus yielding steady increases in certificate prices. Under Scenario 2, developers assume that in the future they will compete against less costly renewables resources for premiums because of advances in the costs and performance of technologies, thus yielding steady decreases in certificate prices.

In the second cost metric used in the Utility Analysis, the costs were expressed as “total in-state production costs.” This metric summarizes the cost of producing power by New York State-based generators (conventional and renewable), including going forward capital, fuel and operations and maintenance (“O&M”) expenditures. Included in this metric are the costs of building new renewable resources to comply with the RPS, along with the offsetting effect of savings resulting from avoided conventional capacity that did not need to be built and in avoided fuel expenditures. Using this metric, the net present value of Scenario 1 was reduced to about \$5 Billion, but that of Scenario 2 *increased*<sup>63</sup> to over \$2 Billion; in both cases as a result of the changes in the cost of producing power by in-state generators.

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<sup>63</sup> The increase is the result of the need for incremental operation of additional peaking generation to meet reserve margins under the assumptions of Scenario 2, principally as a result of the increased operation of intermittent resources.

## B. Staff Analysis

The Staff Analysis employed two different analyses: a production costing model (GE MAPS),<sup>64</sup> and a “supply curve spreadsheet.”<sup>65</sup> GE MAPS is a well-known model that was developed during the period when generation was priced on the basis of embedded utility costs, for the purpose of production costing simulations. It has since been modified for application to competitive markets. The supply curve spreadsheet was constructed for purposes of the present analysis and contains separate supply curves for 2006, 2009 and 2013.<sup>66</sup> The procedures that were employed are described in the DPS Staff Response to Joint Utilities’ Question 22.

The stated intention of the Staff Analysis was to determine the “Direct RPS cost premium over time” and to offset that amount by reductions in “commodity market prices,” and by “indirect electric price suppression” effects.<sup>67</sup> From that information, the Staff Analysis sought to determine electric consumer rate effects.<sup>68</sup>

The Staff Analysis consisted of one study case with several “sensitivities.” The study case includes a number of design elements that distinguish it from the studies performed by the Joint Utilities. For example, while the Utility Analysis, as noted, assumed all RPS resources would be constructed in New York State, the Staff Analysis assumed approximately 2,000 MWs, or almost one-half of the RPS incremental tier demand, would be met through renewable resources

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<sup>64</sup> The DPS Staff/NYSERDA decision to employ GE MAPS required that the date, capacity and specific “node” of each capacity addition be specified as an input. This is because while MAPS has a tremendous amount of transmission and substation level detail, it does not predict entry or exit decisions. It meant that each new renewable, as well as any other new generation source and all retirements, were required to be located by year and node in MAPS.

<sup>65</sup> An additional element estimated the customer cost impacts on a delivery utility by delivery utility basis.

<sup>66</sup> The Staff supply curve for the new renewable generators was developed by LaCapra Associates and Sustainable Energy Advantage. See DPS Staff Response to Joint Utilities’ Question 22b.

<sup>67</sup> See Sustainable energy Advantage LLC June 27, 2003 PowerPoint presentation *Modeling the Impacts of a NY Renewable Portfolio Standard*, p. 13.

<sup>68</sup> *Id.*

constructed outside of New York State.<sup>69</sup> Low cost wind resources in PJM and low cost hydro resources in Canada alone provided 43.7% of the 2013 requirement.<sup>70</sup> The Staff Analysis also assumed highly favorable wind resource parameters, tending to allow wind facilities both to lower their levelized costs (minimizing the needed premium) and improve their capacity factors (which serves both to minimize the levelized cost and therefore premium, and to increase the ICAP which also serves to reduce the premium).

The Staff Analysis calculated costs through 2013 only,<sup>71</sup> again unlike the Utility Analysis, which calculated costs through 2020. The method used in the Staff Analysis to calculate the "direct RPS cost premium" was based on a "long-term contract-for-differences" approach in which the RPS premium payment essentially makes up the difference between the revenues available from the market and the notional total revenue "needs" of the developers, as assumed in the supply curve spreadsheet component of the Staff Analysis. As the DPS Staff Response to Joint Utilities' Question 26 shows, the direct RPS cost premiums are a very significant source of revenue in the Staff Analysis. In the 2013 "increment" of new renewable resources, virtually all of the facilities will be economically dependent upon the RPS premiums.<sup>72</sup> About half will receive almost equivalent revenues from the RPS premium and from the markets.

The Staff Analysis calculations found that the total direct RPS premium costs through 2013 would be \$772 Million (2003\$), offset partially by wholesale market price reductions of \$450 Million (2003\$) as determined by the GE MAPS modeling, leaving a net cost to electric

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<sup>69</sup> Staff Analysis Section V-B, Table 5B-1.

<sup>70</sup> DPS Staff Response to Joint Utilities' Question 19.

<sup>71</sup> With the minor exception of the SBC-like tier for which life-cycle costs were calculated.

<sup>72</sup> The dependence of the facilities on non-market sources of funds may be greater, because the Staff Analysis percentages "do not include other revenue sources such as tax incentives or development grants."

consumers of \$322 Million (2003\$).<sup>73</sup> The Staff Analysis did not report any direct RPS premium costs or reductions in wholesale prices after 2013.<sup>74</sup>

### **C. Utility and Staff Analyses Cost Modeling**

The cost modeling utilized in the Utility Analysis and in the Staff Analysis differ in the following key respects.

#### **1. Contracts**

With respect to the annual costs of the RPS premiums during the 2006 – 2013 time period considered in the Staff Analysis, a “levelized” contract for differences approach was utilized.<sup>75</sup> The “levelized” term connotes that a single value is calculated to represent the economic equivalent of the varying annual revenues from the RPS premium that a given kind of facility, assumed to be developed, or “reached” in the Staff Analysis's supply curve, would receive. While the Staff Analysis limited recognition of costs to only the 2006 through 2013 time period, the Staff Analysis calculated the levelized value of contracts for differences apparently using longer time periods approximating the book lives of the various technologies.<sup>76</sup> That approach necessarily assumes that each facility would operate over its entire book life — an additional twelve to nineteen years beyond 2013 — and receive RPS premium revenues over the entire book life period of the facility pursuant to long-term contracts for differences.<sup>77</sup>

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<sup>73</sup> If the results from the Utility Analysis were restated to the same approach (annuity) used in the Staff Analysis *and truncated to 2013*, the Utility Analysis would show net costs almost 50% greater than those calculated by the Staff Analysis.

<sup>74</sup> DPS Staff Responses to Joint Utilities' Question 25.

<sup>75</sup> In the June 27 meeting this was described as “aggregate compliance costs calculated as weighted average of commitments made over time” Sustainable Energy Advantage LLC June 27, 2003 PowerPoint Presentation, *Modeling the Impact of a NY Renewable Portfolio Standard*, p. 5.

<sup>76</sup> *See Id.* at p. 14; DPS Staff Responses to Joint Utilities' Question 26.

<sup>77</sup> DPS Staff Responses to the Joint Utilities' Question 25 confirms that the Staff Analysis entails long term contracts over the book lives of the renewable assets.

In the long-term contract for differences approach used in the Staff Analysis, the levelized cost of the marginal renewable resource necessary to meet the RPS requirement is frozen for that particular year (*e.g.*, 2006), referred to in the Staff Analysis spreadsheet as an “increment.” The Staff Analysis calculated the renewable premium necessary to support that specific “increment” of renewable generation going forward as the difference between the levelized cost of that resource and the wholesale energy price in the year that increment is “reached.” This contract for differences calculation is done for each marginal renewable resource “reached” in each of the Staff Analysis's three study years, with the total RPS premium then being summed, leading to an energy weighted RPS premium. As noted, this approach assumes long-term contracts for the book life of the renewable facility. If the facility did not know that it would recover its costs over the time period needed to recover the invested capital, there would be no reason for it to accept a “levelized” RPS value.

It is important to understand the allocation of risk inherent in the vision of the RPS set forth in the Staff Analysis. If RPS premium prices fall in the future due to improved wind technology, for example, the counter-party to the contract for differences would then have an “above-market” obligation, as compared to the “market price” of RPS premium required by the newer, more efficient, facility. Conversely, if RPS premium prices rise due to resource degradation issues, the entity that signed the contract for differences would be in a relatively advantageous situation, having locked in a lower price. The Staff Analysis' reliance on long-term contracts thus shifts the risk of future changes in the value of the RPS premium from the renewable resource generator to the counter party, *i.e.*, the LSE, and ultimately to New York State electricity consumers. One of the reasons, then, why long-term contracts may appear to lower

prices is because risk is transferred from the seller to the buyer, in this case, from the renewable resource generator to the New York State consumers, who are the ultimate RPS purchasers.<sup>78</sup>

In contrast to the Staff Analysis' "levelized" approach to calculating the RPS premium, the Utility Analysis determined the RPS premium based on the annual spot price necessary in that year to support the aggregate required amount of incremental renewable generation. This approach selects the renewable resources needed to meet the "target" for a given year through the economic minimization logic of IPM, and then values all incremental renewable generation in each year studied at the spot price in that year defined by the difference between the marginal renewable and the wholesale price. An effect of this approach is to place renewable generators in a position more like that of conventional generators, which have cash flows based upon the prices in the energy markets. For purposes of the cost analysis, IPM forecasts the future prices (with "perfect foresight"<sup>79</sup>) taking into account both future technology improvements as well as the resource degradation assumptions to calculate the price necessary in each modeled year to support the incremental renewable generator coming on line to meet "targeted" renewable demand. Because of this foresight, near term payments to renewable generators may exceed the difference between their book life levelized costs (as calculated by the Staff Analysis) and the commodity prices of energy. This is due to the need for project developers to recoup their investments in the

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<sup>78</sup> Staff Analysis' use of long-term contracts-for-differences raises other additional concerns, including: (a) the difficulty of conducting an acquisition process in the real world in which different resources produce contracts of different duration; (b) future recovery of the cost of these long-term contracts, particularly after 2013, and particularly if the price of these premiums proves to be significantly higher than the price of premiums during that future time; and (c) the impact of bidder behavior in an acquisition process in which bidders are paid their bid price rather than a market clearing price. It is far from clear whether renewable resource generators will bid their cost under these circumstances, as opposed to developing a bid price strategy based on market intelligence concerning their competition and the current and forward price of attribute certificates.

<sup>79</sup> IPM is dynamic in that it has the capability to use forecasts of future conditions, requirements, and option characteristics to make decisions for the present. This capability replicates, as much as possible, the perspective of power plant developers, regulatory personnel, and the public in reviewing important investment options for the electric power industry and electricity consumers.

short-term in the face of falling projected future spot certificate prices. If for example, a renewable developer knows that wind technology will be improving in the future and that, as a result, the certificate market price will be driven lower in the future, he will demand higher payments today in order to weather the lower payments that will be coming. If, on the other hand, he expects higher certificate price payments in the future as a result of renewables being more expensive due to resource degradation, he would be willing to accept certificate prices today that are lower than his levelized cost. In the study, the model “knows” all of this with perfect foresight and the results are determined on an economic optimum basis using the cost minimization functions built into IPM. Under the approach relied upon in the Utility Analysis, price risk thus remains with the renewable resource generator.

## **2. Market Entry and Exit**

GE MAPS was originally designed to simulate the expected decisions of operators during real-time operations. For near-term operations, entry and exit issues are relatively unimportant as compared to other variables such as transmission, therefore MAPS is not equipped to predict economic entry and exit. Hence, MAPS is more properly used for analyses geared to the short-term. The Staff Analysis use of GE MAPS in three short-term (one year), separate studies does not rigorously depict a ten-year time horizon because each of the years studied are independent, not “linked.”

The Staff Analysis did not “model” market entry or exit; it made assumptions about what facilities would close down and what facilities would start up during the time horizon extending through 2013. These assumptions are subjective, not driven by economics. Because of the detailed, node by node structure of GE MAPS, the “load modifiers” and the “generators” were required to be located in order to be modeled on specific nodes. This allocation of renewable resources was a subjective, non-quantitative judgmental process, not the economically-driven

expansion inherent in IPM. Moreover, because of the range of node prices in GE MAPS, the analysts assignment of resources to nodes could significantly affect the results, for example, by preferentially selecting the nodes with the highest prices in the base case.

### 3. Wholesale Price Trajectory

The Staff Analysis Base Case statewide average wholesale price was forecast to increase from 31.80 mills/kwh in 2006 to 32.56 mills/kwh in 2009 and then to 36.63 mills/kwh in 2013. In contrast, the SEP2002 forecasts much more modest price increases (page 3-130, Table 21) of approximately 1% per year between 2008 and 2012 and 2% per year between 2012 and 2016.<sup>80</sup> Between 2009 and 2013, the Staff Analysis' statewide average prices are forecast to increase by over 12%, or almost 3% per year.<sup>81</sup> One consequence of the higher 2013 wholesale price is that lower premium prices are therefore required to support the needed level of renewable generation, greatly reducing the cost of the program. In addition, the Staff Analysis also predicts greater savings in wholesale power costs, to offset the direct costs of the RPS, than the Utility Analysis.<sup>82</sup>

The results of the Staff Analysis depend greatly on DPS Staff's "supply curve." As disclosed by the DPS Staff Response to Joint Utilities Question 22a:

The available amounts of each resource were phased in on an annual basis to represent a combination of factors such as evolving market barriers, delivery and manufacturing infrastructure limitations, development lead time, permitting constraints, market acceptance and technology availability.

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<sup>80</sup> The Utility Analysis forecast essentially flat statewide average wholesale prices from 2009 (32.56 mills/kwh; interestingly, the same value as the Staff Analysis) through 2013 (32.51 mills/kwh).

<sup>81</sup> It thus seems unlikely that the *2002 State Energy Plan* fuel forecast assumptions created the anomaly, as suggested in DPS Staff's Response to Joint Utilities' Question 12.

<sup>82</sup> The Staff Analysis predicts savings of 1.54 mills/kwh, over 60% higher than the 0.96 mills/kwh in wholesale power savings predicted by the Utility Analysis.

DPS Staff’s description points out the subjective nature of the three explicit supply curves utilized in the Staff Analysis. Each of the curves is controlled by the non-transparent “phasing in” of many subjective features.

**D. Costs, Benefits and RPS Design**

Both the Utility Analysis and the Staff Analysis shed light upon the important RPS design decisions that must be made in this proceeding. Consider, for example, the following table:

**Cost Methodology Comparison in Billions of Dollars**

		Spot Price Premium		Contract for Differences		
NPV of RPS Premium in 2003 for Period Stated		Joint Utilities Scenario 1	Joint Utilities Scenario 2	Joint Utilities Scenario 1	Joint Utilities Scenario 2	Staff
NPV of Costs through 2013	Year 2000 \$	\$2.24	\$1.24	\$1.69	\$0.46	\$0.74
NPV of costs through 2020		\$6.74	\$1.88	\$4.09	\$0.89	\$1.49

*Note: The table values rely on the "net" costs reported by the Staff Analysis; all NPVs were calculated using a 6.97% discount rate; the Staff Analysis 2020 NPV assumes costs are held constant at 2013 levels through 2020.*

Setting aside any discussion of inputs, assumptions, and methodologies that vary between the Utility Analysis and Staff Analysis, all of which must be addressed to understand and properly use these numbers, several important preliminary observations can be made based on this data.

First, the RPS has the potential to be costly to New York State consumers. Regardless of the extent to which it may be offset by savings in the wholesale energy market, the premium itself is an important number that should be minimized as a matter of policy as a contributing factor to the customer’s electric bill both (i) during the 2006 - 2013 RPS ramping-up period and (ii) at least equally importantly, during the subsequent end-state period, as New York State eliminates the premium and returns the New York State energy market to its normal condition where generators

are no longer dependent upon this extra-market source of revenue. If the Commission is not careful in its design of the RPS program, it is clearly possible not only that the RPS program will be costly, but also that premiums may rise significantly over time, or customers many years from now may find themselves committed to pay prices for certificates that are substantially greater than the prices equivalent certificates command on the market of that day. At a minimum, the Commission should examine the issue of premium payments in 2013, and develop a schedule for the phasing out and/or cessation of premium payments.

Second, both the Utility Analysis and the Staff Analysis include assumptions concerning available renewable resources. Although the implicit “supply curve” employed in IPM and the explicit supply curves employed in the Staff Analysis differ in many ways, in principle both reflect (more or less completely and rigorously) the addition of new resources on an economic “least cost” basis. Unless the ability of new renewable facilities to receive an RPS premium is constrained to match the “supply curves” (implicit or explicit in the two differing analyses), the actual addition of new facilities will not be the economically minimum scenario. For example, the Staff Analysis (Table 5B-1) shows RPS premiums ranging from \$2.40/MWH (Unicode 62) to \$27.30/MWH (Unicode 33), for a factor of 100. If facilities like those contemplated by Unicode 33 (PJM coal bio-mass co-firing) are permitted to receive RPS premium payments in 2006, the actual costs imposed on New York State consumers and businesses will be many times those suggested by the Staff Analysis. Given the essentially positive slope of the Staff Analysis supply curve, each year’s incremental RPS requirement is met by lower cost resources than the next year’s requirement. In effect, only certain kinds of “eligible” resources are “reached” in satisfying any given year’s incremental requirement, and the costs of the “reached” resources increases over time. One effect of this is to reduce the NPV of the indicated costs.

As a practical matter, this will never happen. There is no way to design an acquisition process that will guarantee that developers will develop all the least-cost technologies at the least-cost sites before they move on to the next most expensive, develop them with universal success, and dedicate the output of those facilities to New York State's RPS program rather than to the voluntary green market or to the renewables market in some other state or province.<sup>83</sup> In that sense, therefore, all the estimates of premium costs on the table above may underestimate the actual near-term program cost.

On the other hand, this also means that it is not inevitable that the prices of renewable resources will rise over time, in part because it is not ordained that the least-cost resources will be bid in the early years of the RPS program. It is also possible that over the life of the RPS, renewable facilities will come down in cost; indeed, the underlying purpose of the RPS is to facilitate a transition to a state whereby these technologies will no longer require subsidies. Implicit in this concept is the idea that technology costs will continue to decline and developers will continue to improve their ability to reduce expenses associated with these facilities over time.

This critical source of uncertainty in the cost of the RPS program cannot be resolved by modeling or theory, as discussed above in Section VI (A). None of us has any way to know today which of these model outcomes summarized in the table above will prove to be true in real life, because unlike the foresight of the generators assumed in these models, our real life foresight is “imperfect.” Yet the consequences of these two outcomes are substantial, because the two will burden consumers quite differently. Certificate prices that drop over time will position New York State for the eventual elimination of the RPS program, while prices that rise will make the

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<sup>83</sup> A fourth possible outlet for renewable facilities sales is Executive Order 111. It is unclear whether the renewables purchase requirement under this executive order in New York State will be superseded by the RPS, will be added to the RPS requirement within the RPS program, will be considered a voluntary green market purchase, or will constitute a unique purchase classification of its own.

program increasingly expensive on a real-time basis. Particularly in the out years after 2013, consumers may question commitments made on their behalf years ago, for technologies long obsolete, requiring outside subsidy payments. This argues strongly in favor of designing an RPS program with "circuit-breaker" capabilities and with a focus on encouraging low certificate prices. The Joint Utilities have proposed such an RPS program in these Initial Comments.

Third, as noted, the Utility Analysis and Staff Analysis handled imports in very different ways. As a practical matter, however, any RPS design should seek to minimize the transaction costs for renewable resource generators to participate in the New York State RPS. Adoption of the Central Procurement Model design proposed in these Initial Comments would achieve this goal quite effectively. Compared to a traditional RFP, the proposed auction mechanism would be relatively transparent, requirements are quite clear-cut, and participation in the program should be less complex. Compared to the Individual Compliance Model, developers would not need to accommodate a multiplicity of acquisition mechanisms, either on simultaneous schedules (imposing an enormous burden on personnel) or on different schedules (imposing high levels of outcome and planning uncertainty), on different scales, with potentially different approval criteria. Nor would they need to run the risk of being approved by some LSEs, rejected by other LSEs, and left with commitments but without adequate funding to achieve them. The appeal of the Central Procurement Model itself may help attract and retain renewables to the New York State RPS market.

Fourth, the differing forms of contracts between the Utility Analysis and the Staff Analysis are at opposite ends of the spectrum in terms of who bears the price risk — the LSE or the renewable resource generator. The Central Procurement Model proposed by the Joint Utilities in these Initial Comments places that risk on the entity who can best manage it, namely, the

renewable resource generator. The auction process under the Central Procurement Model would provide an extended period of revenue certainty for generators, plus a well-designed market structure that will give early units in particular future opportunities to repeat those locked-in sales commitments, without a requirement for long-term contracts that expose New York State LSEs and consumers to an unacceptable level of risk.

Fifth, it is clearly possible to design the RPS in such a way as to increase its cost. Various forms of tiers, set-asides, or carve-outs to ensure that special needs are met would accomplish this undesirable result. Designing an acquisition process that met needs other than cost minimization within a set of eligible resources would do the same, particularly if this process increased generator transaction costs, created gaming opportunities, caused confusion, or encouraged low-cost generators to pursue other markets.

Finally, the magnitude of the wholesale energy price reductions due to the impact of the RPS is unclear, reinforcing the importance of a focus on premiums, while the impact of the RPS on the price of natural gas will be negligible. As discussed above, although the Joint Utilities fully support inclusion of imports in the list of eligible resources, the Joint Utilities do not believe that the level of imports that will ultimately make up the RPS can be accurately predicted; once again, it will need to be experienced. DPS Staff, in responding to Joint Utilities' Question 20, acknowledged the sensitivity of the price reductions calculated in the Staff Analysis:

Because the supply curve is generally broad and flat, imports eliminated from the table of reached resources would be replaced by additional, slightly higher-priced domestic resources. In other words, the supply curve contains a number of new renewable resources that were available but not selected to meet the RPS requirements, and which feature significant volumes at prices only moderately above the estimated contract prices in Staff's analysis. This suggests that potential changes to the supply or demand for new renewable resources (such as limitation or exclusion of imports) would not change the cost of RPS compliance "dramatically". While this would not dramatically increase the cost of the premium, *it*

*would have a large impact on wholesale price suppression.* The calculations are cumbersome. We will provide a quantification of our answer as soon as the calculations are completed.

(emphasis supplied). In contrast, there has been no study of demand elasticity to provide a basis for concluding that the decremental changes in gas usage shown by the cost studies are sufficient to produce any measurable elastic response. The Utility Analysis found reductions of 4% to 5% in the use of natural gas for power production purposes in New York State, as new renewable projects displaced conventional generation, but reductions of this magnitude are insufficient to produce price elasticity at the state or national level. In light of these uncertainties, adoption of the Central Procurement Model, and its associated cost- and risk-minimization features, would be appropriate and warranted.

What has clearly emerged as a result of the Staff Analysis and the Utility Analysis is the need for further analysis of costs and benefits. Pending formulation of an RPS, or at least resolution of important issues such as tiers and deliverability, the development of appropriate assumptions and input cannot be undertaken in any meaningful respect. For this reason, the Joint Utilities recommend that the Commission direct ongoing cost evaluations as this proceeding develops.

## **VII. COST RECOVERY METHODOLOGY**

In its Instituting Order, the Commission requested that the ALJ solicit comments on fourteen "Threshold Issues." Threshold Issue 6 concerns "Methodologies for the recovery of costs by regulated utilities." In setting forth Threshold Issue 6, the Commission recognized that there are costs that utilities will incur as a result of implementation of the RPS in New York State and that those costs should be recovered by regulated utilities. The Joint Utilities agree that regulated utilities must be permitted cost recovery.

In order to achieve such cost recovery, RPS-related costs should be charged, on an equitable basis, to all electric energy consumers. To do otherwise would unduly burden regulated utilities and other participating LSEs and create inequities among consumers. The Commission must assure that the full cost of the RPS is assessed on the consumers of New York State and that, consistent with applicable laws, no provision of the RPS would adversely impact the revenues of the regulated utilities.

The full costs of the RPS include, but would not be limited to, premium costs, program implementation costs, ongoing administrative costs and reporting costs. The Joint Utilities recommend that the following methodology be adopted (or endorsed, as applicable) by the Commission to assure full cost recovery by regulated utilities:

1. All costs, direct (premium) costs and indirect (program implementation, administrative and reporting) costs would be collected from all LSEs and passed through to the end use consumers.
  - a. Premium costs: Costs to support renewable technologies that are not yet cost competitive would be established during the Central Procurement Model solicitation process and separately accounted for. Premium costs would be paid to the renewable generator. As discussed in Section II (C) (4), under the Joint Utilities' proposed Central Procurement Model such costs would be included in the existing NYISO Rate Schedule 1 or some new rate schedule, so that the costs are separately accounted for.
  - b. Program implementation, administrative and reporting costs: Costs of a central administrator, including system development, implementation costs, and costs of credit tracking and procurement, as well as any costs relating to

reporting on progress of the renewable target, would be forecast annually, applied to the premium cost charged the LSEs, passed through to the end-use consumers, and reconciled annually.

2. All costs that are identified in the final NYSERDA/NYISO RFP Study on Reliability, “Study the Effects of Integrating Wind Power on Transmission System Planning, Reliability and Operations”<sup>84</sup> would be recovered. Those costs would include:
  - a. Costs of required Transmission/Distribution system upgrades for integration of renewable generation.
  - b. Cost impacts related to ancillary services, operating reserves, regulation requirements and response rates.
  - c. Costs relating to any additional services of the NYISO.
  - d. Any costs from potential impacts on congestion.
3. All other costs identified by subsequent information relating to the RPS would be recoverable by the regulated utility incurring such additional costs.

The Joint Utilities support a cost recovery mechanism that ensures that regulated utilities recover above-market costs in a competitively-neutral manner on an as-incurred basis from all customers receiving retail electric service. All costs would be recovered on a current basis (monthly, quarterly, or annually), irrespective of existing rate plan provisions.

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<sup>84</sup> A draft of this RFP Study was issued on August 11, 2003.

## CONCLUSION

In these Initial Comments, the Joint Utilities have discussed the many advantages of a Central Procurement Model, and have proposed a specific approach for the Commission's consideration. This approach, in the judgment of the Joint Utilities, will result in the full achievement of the RPS at the lowest costs to New York State consumers. The Joint Utilities have also made a number of recommendations regarding eligibility and certificates trading. The Joint Utilities have discussed how the Working Objectives should be applied to a consideration of all these matters. Finally, the Joint Utilities have addressed cost issues raised by the Utility Analysis and the Staff Analysis, along with an appropriate Cost Recovery Methodology.

The Joint Utilities recognize that the design of an RPS will require the evaluation of many important issues, including market design, eligibility and reliability, and a balancing of these issues with important Working Objectives. In these Initial Comments, the Joint Utilities have offered suggestions on how these matters could be resolved, and urge their adoption by the Commission. To the extent any Recommended Decision or Commission order in this proceeding leaves one or more of these matters open, the Joint Utilities look forward to continuation of the collaborative Working Group process.

Respectfully submitted,

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## APPENDIX "A" - PROCEDURAL HISTORY

By its Instituting Order, the Commission announced the initiation of a proceeding to develop and implement an RPS in New York State. According to the Commission, the goals of its RPS efforts, as set forth in the Instituting Order, are to address “the effects on our climate of fossil-fired generation and the security implications of importing much of the fuel needed to supply our electricity needs.”<sup>1</sup> An additional goal is to rectify the State’s vulnerability to price spikes and possible supply disruptions as a result of its over-dependence on a finite supply of natural gas and other fossil fuels.<sup>2</sup>

In the Instituting Order, the Commission directed that an Administrative Law Judge (“ALJ”) be appointed and that the ALJ facilitate a collaborative process with the goal of developing a draft policy statement.<sup>3</sup> The Commission also required the ALJ to provide periodic reports to the Commission Chairman concerning the status of the proceeding.<sup>4</sup> Additionally, the Commission directed the ALJ to obtain comments on a number of threshold issues identified in the Instituting Order.<sup>5</sup>

ALJ Eleanor Stein was assigned to this proceeding. On February 20, 2003, ALJ Stein issued a *Ruling Concerning Procedure and Schedule*,<sup>6</sup> in which she commenced the process for establishing the procedures and schedule for the proceeding. A *Notice of Procedural Conference* scheduling a March 4, 2003 procedural conference was issued on the same day. At the ensuing

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<sup>1</sup> Instituting Order, *mimeo* p. 1.

<sup>2</sup> *Id.*

<sup>3</sup> Instituting Order, *mimeo* p. 5, Ordering Paragraph 1.

<sup>4</sup> Instituting Order, *mimeo* p. 5, Ordering Paragraph 2.

<sup>5</sup> Instituting Order, *mimeo* pp. 3-4.

<sup>6</sup> Case 03-E-0188, Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, *Ruling Concerning Procedure and Schedule* (issued February 20, 2003) (the “February 2003 Order”) *mimeo* p. 1.

conference, ALJ Stein explained the collaborative process she intended to follow in this case. ALJ Stein stated that she planned to schedule a series of educational seminars, followed by collaborative RPS design sessions.

Subsequently, ALJ Stein issued a *Ruling Revising Schedule* on March 6, 2003. In that Ruling, she extended the time for filing comments addressing the threshold issues identified in the Instituting Order to March 28, 2003. Numerous parties submitted comments.

Following the submission of the comments referenced above, ALJ Stein convened several educational seminar sessions on April 7 and 8, 2003. ALJ Stein also facilitated a series of collaborative meetings in accordance with the schedule set forth in a *Notice of Collaborative Meetings*.<sup>7</sup> During these collaborative meetings, participating parties organized into various workgroups to address such issues as resource eligibility and the model to be implemented. The product of these workgroups was posted on the Commission's web site.

On June 9, 2003, a *Notice of Workshop on Cost Benefit Analysis Methodology* was issued. The purpose of the June 27, 2003 workshop conducted pursuant to that Notice was to discuss the scope of the appropriate methodologies for assessing the costs and benefits of various renewable portfolio designs. The meeting focused exclusively on the cost study prepared by Staff of the DPS.

*A Ruling on Motion to Amend Comment Schedule and Convene Reliability Impacts Meeting* was issued on June 13, 2003. In that Ruling, ALJ Stein modified the schedule so that comments concerning RPS design and cost issues would be done in the same set of comments. In the June 19, 2003 Ruling, ALJ Stein outlined the process parties are to follow for their comments. Additionally, ALJ Stein issued revised working objectives.

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<sup>7</sup> Case 03-E-03-E-0188 - Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, *Notice of Collaborative Meeting* (issued March 27, 2003) (the "March 27, 2003 Ruling").

By letter dated July 21, 2003, the schedule for the submission of cost studies and initial and reply comments was extended to July 28, August 20 and 29, respectively. Thereafter, on August 12, 2003, a technical conference was held to review various cost analyses prepared by several parties to this proceeding. Recognizing the complexity of the cost and benefit studies and the importance of a studied RPS plan, ALJ Stein issued the August 18, 2003 Ruling extending the time for the filing of initial comments until September 22, 2003. The ALJ's August 18 Ruling also instructed parties to file "any additional motions concerning schedule process, further meetings, or added procedure steps, no later than September 22, 2003."<sup>8</sup>

In a Notice issued on September 18, 2003, the parties were advised of the scheduling of a conference concerning reliability on October 10, 2003. The purpose of the conference is a presentation by the NYISO and discussion concerning the impact of additional renewable generation on the reliability of the bulk power system.

In a *Further Ruling Concerning Schedule and Procedure*, issued September 19, 2003, the ALJ extended the schedule for submission of initial comments until September 26, and for the submission of reply comments until October 31, 2003.

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<sup>8</sup> August 18, 2003 Ruling, *mimeo* p. 2. The ALJ also noted that working groups still intending to file further reports may do so until September 15, 2003. The ALJ reserved decision on as to the appropriate filing date for reply comments.

## APPENDIX "B" - CERTIFICATES LADDER

Centralized Procurement of New Renewable Resources Cess-stripped Auction Example																	
Example - Using a 2013 target of 14.5 million MWh																	
Target quantity in MWh (200,000)																	
Target Year	Quantity Purchased (MWh (000000))	Annual Increment															
2018	14.5	0											13	13	13	13	13
2017	14.5	0											12	12	12	12	12
2016	14.5	0											11	11	11	11	11
2015	14.5	0											10	10	10	10	10
2014	14.5	0											9	9	9	9	9
2013	14.5	2.2											8	8	8	8	8
2012	12.3	2.2											7	7	7	7	7
2011	10.1	2.2											6	6	6	6	6
2010	7.9	2.2											5	5	5	5	5
2009	5.7	2.2											4	4	4	4	4
2008	3.5	1.6											3	3	3	3	3
2007	1.9	1.1											2	2	2	2	2
2006	0.8	0.8											1	1	1	1	1
<b>Total to 2013</b>	<b>14.5</b>		<b>Cumulative total &gt;&gt;</b>	0.8	1.9	3.5	5.7	7.9	10.1	12.3	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Year >>			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Auction No. >>>			1	2	3	4	5	6	7	8	9	10	11	12			
Quantity sought in each Auction for Target Year <			0.8	1.1	1.6	2.2	2.2	3	3.3	3.8	2.2	2.2	3	3.3			
The award winner in the 2006 auction for the term 2006 - 2010 is eligible for entering the 2009 auction for the term 2011 - 2015.																	

Notes:

- (1) Starting with Auction No. 6 in 2009, the Quantity sought will include the Annual Increment plus an additional amount to reflect the Quantity that is no longer committed at the end of each 5 year strip.
- (2) This certificates ladder is a conceptual illustration. As stated in Section IV (D), the Joint Utilities recommend that, at a minimum, in 2013 the Commission should develop a schedule for the phasing out and/or cessation of premium payments.

## APPENDIX "C" - FORECASTING WINNERS

A simple comparison of the two cost studies produced in this proceeding is quite illuminating: we can't really be certain what kind of facilities will be used to meet the requirements of the RPS between now and 2013. We are even less sure where any particular plant will be located, who will own it, how much each facility will cost, and what price each generator owner will bid into a certificate auction.

In the Joint Upstate Utilities cost study, wind, biomass, landfill gas, and even fuel cells (under one scenario) were found to be relatively cost-competitive. The study was conservatively designed to assume that qualifying imports would be balanced by qualifying exports. In the DPS Staff/NYSERDA -sponsored cost study, wind, hydro, biomass, landfill gas, and manure digestion were found economic, with almost forty percent of the resources on a capacity basis imported from Canada or PJM.

It becomes clear that these individual resources are far from identical: a wind facility under one scenario is not necessarily the same as a wind plant under another. Moreover, neither study intended the choice of studied resources to be dispositive. Both studies agreed that renewable resource technologies not on either list might prove to be economical options in practice.

In the real world, the resources that will actually be built will depend on many factors: the state of development of particular technologies, exogenous subsidies (*e.g.*, the federal wind production tax credit), the interests and capabilities of individual developers, and perhaps especially important for renewables, local siting opportunities and support. These are not factors that lend themselves to simulation modeling. They can also be expected to have different impacts over time on different technologies in different locations throughout New York State and the region.

The RPS will require a very substantial commitment by New York in new renewable generation and will cause the new installation or modification of quite a number of generating facilities. It makes sense to avoid constraining decisions about eligible resources based on the results of the cost simulation models. Instead, the range of results should be used as an indication that we cannot be certain in advance what choices will be in the best interests of the consumers of New York State.

## **APPENDIX "D" - PJM GATS PROGRAM AND TIMELINE**

### **GATS Concept Draft (Edited to Eliminate Multistate-Only Material)**

#### **Background**

The GATS database will be designed to support three general types of state policies and regulations: (1) Information Disclosure by retail load serving entities to retail customers; (2) Renewable Portfolio Standard obligations of retail LSEs; and (3) Emission Performance Standard obligations of retail LSEs.

In simple terms, Information Disclosure requires a retail LSE to inform its customers on a periodic basis (quarterly, semi-annually, or annually) of the fuel source, emissions, and other characteristics of the electricity resources supplied to the customer.

A Renewable Portfolio Standard (“RPS”) requires a retail LSE to include a minimum percentage of renewable resources in its mix of electricity resources supplied to customers.

An Emissions/Generation Performance Standard (“EPS” or “GPS”) requires a retail LSE not to exceed a maximum threshold of specific pollutants in its mix of electricity resources supplied to customers.

The GATS Working Group, comprised of representatives of PJM’s regulatory agencies (primarily electric and air), PJM market participants, and PJM staff, has been meeting since late 2001 to develop a consensus on how the various state policies described above could be accommodated in a PJM-wide database. This project report describes the Working Group’s consensus proposal for the development and implementation of a GATS database.

#### **Overview**

The GATS Working Group has developed a proposal for a GATS database that will maintain a one-for-one match between energy produced and energy consumed in PJM, as well as imports and exports. PJM currently administers a wholesale electricity market that is settled each hour as to supply and load obligations. The GATS will contain hourly generation information, for each individual PJM generation unit, and will create generator specific certificates that identify the relevant generation attributes necessary for load-serving entities (LSEs) to satisfy state policies and regulations.<sup>1</sup> LSEs will be

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<sup>1</sup> Imports will have the option of being “generator specific” or “system average” depending on the comparability of the exporting control area’s generation information system to PJM’s.

required to obtain certificates equal to the loads they serve.<sup>2</sup> The certificates will contain the information needed to allow LSEs to demonstrate their compliance with state requirements and to allow state agencies to verify that compliance.

A certificates approach will provide an efficient process for load-serving entities to develop specific products for retail consumers with a high degree of certainty that their product claims can be verified. For owners of generation, a certificates approach will provide a means to precisely measure the value to the retail consumer of particular attributes of each generation unit. For state agencies seeking effective ways to implement policies and regulations, a certificates approach and central database will provide a means to monitor and document compliance.

## **GATS-WG Mission**

To recommend to the PJM Energy Markets Committee a single information system that will support reporting, compliance, and verification requirements related to environmental attributes of electric generation. Such a system should: Ensure accurate accounting and reporting, facilitate efficient and transparent transactions among market participants, provide flexibility to accommodate varied and changing state policies or programs, maintain liquidity in the energy market, mitigate seams issues, and be cost effective.

### **Assumptions**

1. Generator information will be tracked whether unbundled or bundled.
2. Support the development of the exchange/transfer of attributes for certificates.
3. The system will be flexible to try to accommodate new environmental requirements or state initiatives.
4. The system must assure that each MWh has only one certificate and owner at any point in time to preclude double counting of certificates.
5. The system will produce reports required by regulators/participants.
6. Participants should be allowed to review preliminary “test” data and results (such as labels), and to identify problems to PJM, before the final results are issued.

### **Definitions**

*Attribute:* a characteristic of a generator, such as location, vintage, emissions output, fuel, state program eligibility, etc.

*Certificate:* represents all attributes associated with each MWh (or smaller increment) generated whether bundled or unbundled, traded or not traded.

*Generation Attribute Tracking System (GATS):* a database that is able to track the ownership of certificates that result from the generation of electricity.

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<sup>2</sup> LSEs will be able to obtain those certificates either by purchasing specific desired certificates or taking the residual mix at the end of the settlement period.

*Energy:* the physical electricity commodity of the electrons transmitted through the power grid.

*Reserve Account:* a GATS sub-account established by an LSE or [other GATS participant] that allows the LSE to sell certificates directly to retail customers. LSEs must demonstrate a retail sale in order to transfer certificates into the reserve account. Once certificates are in the reserve account, they cannot be counted in the residual mix calculation at the end of the certificate transaction period. [WG still needs to discuss whether there should be restrictions on which certificates can be placed into reserve accounts.]

## **System Design**

### 1. Certificates for Every MWhr

As MWhrs are generated within the PJM system, certificates will be created and placed into the generators' GATS accounts. A single certificate will be generated for each and every MWhr to allow market participants and states to rely on the system for various requirements, including emissions and fuel mix disclosure requirements. Each certificate will contain all of the attributes associated with that MWhr. Certificates cannot be disaggregated into their individual attributes and traded separately. The information system will allow all certificates to be traded based on market demand.

### 2. Certificates are Unbundled

All certificates will be unbundled from the underlying energy and will be permitted to trade separately. The information system will track all certificates.

### 3. GATS Accounts/Registration

The information system will maintain an account for each entity that generates electricity and for each entity that serves load in PJM. Retail LSEs selling multiple products will be permitted to set up a sub-account for each retail product. In addition, a special PJM membership category will be created for entities that market only certificates. On an annual basis GATS will provide a report to each account holder. Those reports will form the basis for the retail LSE to make filings with state agencies that administer the relevant state policies or regulations.

The system will allow all PJM members to register for an account. Default values will be established for generators who choose not to register. In addition a special class of PJM membership will be established to allow GATS users without full PJM membership to record their attribute transactions in the system.

### 4. Scope of GATS

The system will collect information on all generation resources located in PJM, all MWhrs produced, and all load served within the PJM region (see Generation Data Sources for information on how data will be collected). The system will be designed to

collect information and track ownership of imports of certificates to the PJM system in the same manner, whether from other control areas or from distributed generation. All certificate transfers will be recorded in the system and all parties conducting certificate transactions will be required to record the transfer of certificates in GATS.

#### 5. No Double Counting

The information system will create a unique serial number for every certificate as they are created/generated. Each certificate can only be held in one account at a time so as to eliminate the possibility of double counting.

#### 6. Certificate Transactions

Certificate transactions require an affirmative action by both sellers and buyers. Certificate sellers will transfer the specified number of certificates they are selling to a designated purchaser's account. The transaction will be deemed complete when the purchaser affirms the transaction by accepting the certificates from the seller.

Account holders operating in a state that requires some or all transactions of certificates to be joined or "bundled" with the underlying energy, shall demonstrate compliance with these requirements through the contracts they make.

Market participants should be able to self-supply, arrange bilateral exchanges in advance of actual generation, purchase certificates through a central bulletin board, and exchange certificates through private arrangements over a period of time. Regardless of the exchange process used, market participants transferring certificates will be required to complete the transaction within the GATS prior to the close of the transfer period.

#### 7. Certificate Transfer Period

In an effort to facilitate accurate regulatory reporting, eliminate the ability of generators to exercise market power, and maintain the commodity relationship and one-for-one match between energy and certificates, the system will be designed with a set transfer period. Certificate transactions between and among PJM participants can occur over a twelve-month period (*i.e.*, a calendar year). At the conclusion of the calendar year, the retail LSE accounts maintained by the GATS administrator will be closed and a report sent to each account holder.

At the end of the calendar year period, all unsold/unused certificates will be pooled and an average resource mix will be calculated (this average is called the residual mix). Residual mix certificates will then be allocated proportionately to all LSEs who are short of certificates (*i.e.*, do not have a one-to-one match with the MWhr of load they served). At the end of each calendar year, all certificates will be accounted for due to the balance between generation production and load consumption, again maintaining the one-for-one match.

## 8. Retail LSE Obligations

Each retail LSE must obtain certificates equal to all of its retail energy sales. Pill members that do not have retail load obligations would not be required to obtain certificates. Pill members who serve retail load but have only minimal or no interest in the certificates associated with the power they provide could obtain their certificates from the residual mix pool; these residual mix certificates will be assigned on a pro rata basis at the end of the transfer period.

Renewable/clean certificate sales to end-use customers will be permitted. Parties interested in doing this must set up “reserve” accounts.

## 9. GATS Reporting Cycle

GATS will issue reports for any time period required by any state program. Reports can be created as of a date certain. Subject to state requirements, GATS will design an ability to issue preliminary reports, for example 60 days before a final report, so that users may confirm accuracy or engage in additional trades as necessary to meet state program requirements or match a desired portfolio mix. [Specific cycle timeline must be developed]

In addition, standard practices for releasing generator data need to be taken into consideration to protect confidentiality of information. The generator data subgroup is addressing the confidentiality issue in detail.

## 10. Bulletin Board

The information system will include a posting system, similar to the bulletin board used in the PJM capacity market and proposed for FTRs, where market participants can voluntarily post bids and offers. The system will not initially include a trading platform or provide a market clearing function, but it will not preclude the development of this function if the need for more price transparency arises in the future.

## 11. Generation Data Sources (*e.g.*, Generation, MWhr, Load, Emissions)

The system will use the PJM market settlement data to collect information on MWhrs produced. The system will initially use EPA’s E-GRID data to capture emissions data until a more current source can be identified. The system will be supplemented with self-reported data for smaller generators and behind-the-meter generators. Protocols will be established for dual-fuel, multi-fuel units. There is a sub-group working on these issues.

## 12. Behind-the-Meter Generation

[Placeholder]

Behind the meter generation (BTM) should be recognized as part of GATS. A BTM generation aggregator or owner will be able to register for a GATS account. BTM resources will enter generation and emissions data periodically (quarterly). Data will be

collected by the aggregator or owner and reported to GATS. The generation data should be reported in whole MWhr increments and must be collected using a revenue quality meter. Data should be verified by a third party independent audit-which is the responsibility of the aggregator or owner.

### 13. Import/Export

[Placeholder]

In an effort to minimize seams issues and reduce certificate transaction costs, the system will allow for the import of certificates from neighboring regions that offer reciprocal treatment of PJM certificates. A system average shall be used in the absence of such a compatible system. Certificate transactions from incompatible systems can be allowed if appropriate verification measures are in place and the transactions are bi-lateral contracts.

### 14. PJM Market Evolution/Expansion

The system will be flexible to allow for PJM market expansion, as well as further state program requirements that are developed. It must be flexible enough to accommodate new data fields and new reporting needs. It must be able to be queried numerous ways for various market participants including regulators, LSEs, generators, and marketers.

As the system expands, the system will collect data for the newly added generation resources and load and create accounts for additional participants. It is possible that states in the new market areas will have different regulations that might require some changes to the system. The GATS-WG will need to evaluate this with participants in the expanded market on a case- by-case basis as the PJM market expands.

### 15. Treatment of Existing Power Purchase Agreements

Parties under contract will determine ownership of the certificates and will use the GATS system to transfer certificates as appropriate. If the parties choose not to identify ownership, the certificates will default to the purchaser of the energy.

**DRAFT**  
**PJM GATS Timeline**

Refer to the attached diagram for a comparison of the:

1. NE GIS timeline and
2. Draft PJM GATS timeline.

**NE GIS:**

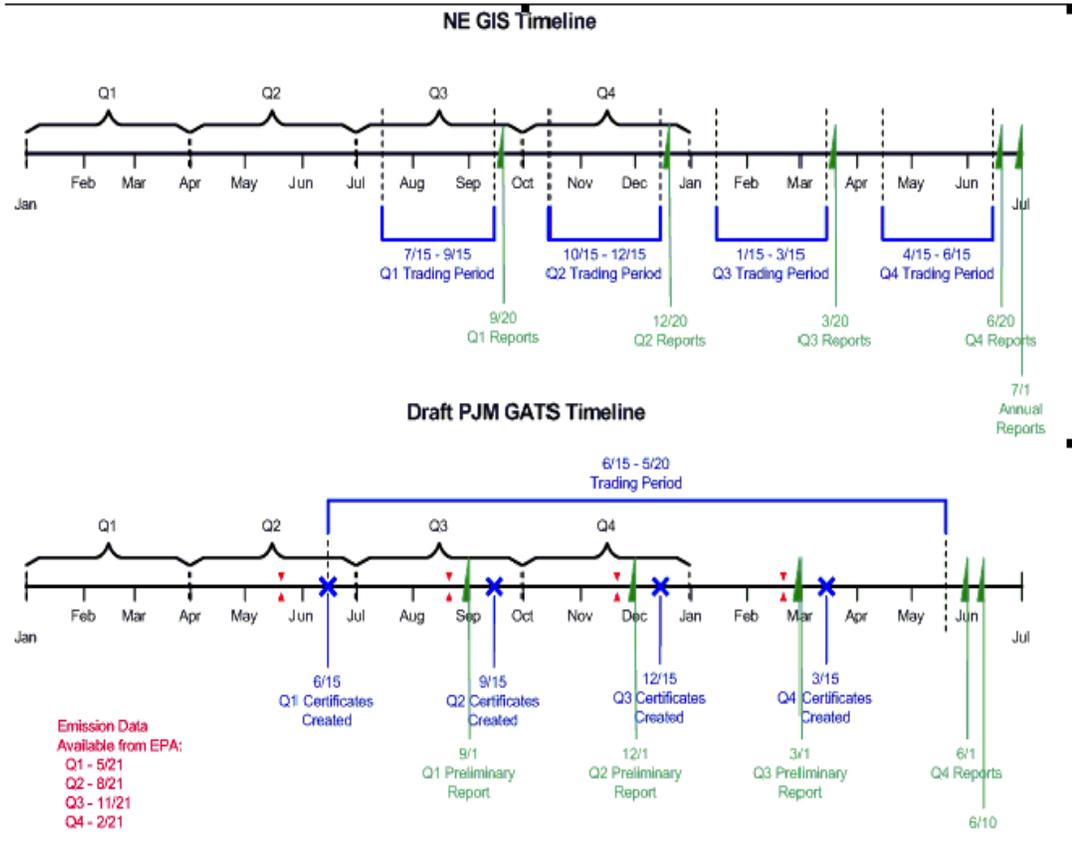
Period	Certificate Creation Date	Settlement Date	Reports Issued
Q1	Jul 15 <sup>th</sup>	Sep 15 <sup>th</sup>	Sep 20 <sup>th</sup>
Q2	Oct 15 <sup>th</sup>	Dec 15 <sup>th</sup>	Dec 20 <sup>th</sup>
Q3	Jan 15 <sup>th</sup>	Mar 15 <sup>th</sup>	Mar 20 <sup>th</sup>
Q4	Apr 15 <sup>th</sup>	Jun 15 <sup>th</sup>	Jun 20 <sup>th</sup>

1. Certificates are created quarterly.
2. The following data must be entered five days before the Certificate Creation Date:
  - Fuel Source - for multi-fueled units, specify the proportion of output per fuel type
  - Emissions data (in pounds)
  - Labor characteristics
  - Other data updates
  - Requests for adjustments to the number of certificates to be created.
3. There is a two month trading period
4. At the end of the trading period, all unsettled certificates are retired.
5. Reports are issued five days later

**PJM GATS:**

Period	EPA Emissions Data Available	Certificate Creation Date	Settlement Date	Reports Issued
Q1	May 21 <sup>st</sup>	Jun 15 <sup>th</sup>	May 20 <sup>th</sup>	Sep 1 <sup>st</sup>
Q2	Aug 21 <sup>st</sup>	Sep 15 <sup>th</sup>	Same	Dec 1 <sup>st</sup>
Q3	Nov 21 <sup>st</sup>	Dec 15 <sup>th</sup>	Same	Mar 1 <sup>st</sup>
Q4	Feb 21 <sup>st</sup>	Mar 15 <sup>th</sup>	Same	Jun 1 <sup>st</sup>

1. Certificates are created quarterly.
2. Certificate creation data is determined by availability of quarterly emissions data from the EPA, and to allow GATS account holders time to review data before certificates are created.
3. Preliminary reports are issued each quarter. These reports are cumulative and include a preliminary residual mix calculation. However, no certificates are transferred as a result of the residual mix calculation.
4. There is an annual settlement on May 20th for the preceding calendar year.
5. On this settlement date all certificates for generation produced in the previous calendar year are retired for the purposes of GATS.



KAS - 6/4/2003  
Does # 215014, v1