NYISO 2005 Market Evolution Plan 2007-2011

Section I – Overview and Rationale

Objectives of the Market Evolution Plan

Since its inception in December 1999, the New York Independent System Operator's (NYISO) markets have been driven by the need to provide proper price signals for all market participants. Proper price signals incent behavior that supports reliable operations and encourages investment in new generation / transmission / demand response infrastructure. NYISO's market at start-up offered what many believed were the most comprehensive set of market products of any ISO. These products included: two-settlement energy markets; ancillary services markets addressing regulation and multiple locational reserve products; locational capacity markets and internal congestion hedges.

In the five plus years since market initiation, the NYISO has made a number of significant additions and improvements, notably:

- opportunities for demand response providers to participate in both market- and reliability-based programs,
- fair and equitable methods of detecting and mitigating market power to prevent behavior that may be privately profitable, but is harmful to market efficiency,
- virtual load and supply trading, resulting in better convergence between day-ahead and real-time prices,
- a variable resource requirement (demand curve) in the installed capacity market, providing greater certainty and reduced capacity price volatility, and
- SMD2.0, with full two-settlement markets for ancillary services, consistent network modeling between day-ahead and real-time markets, and better recognition and consequent pricing during scarcity conditions.

These and other market changes over the past five years have benefited from significant stakeholder involvement, starting at the earliest conceptual design and working through project prioritization and feedback subsequent to implementation. While this process has traditionally been carried out with a one- to two-year implementation horizon, effective market design should be viewed in light of the NYISO's longer-term strategic initiatives.

This market evolution plan provides an overview of the rationale for future market enhancements, discusses the process for evaluating longer-term issues, and summarizes the market initiatives facing the NYISO over the next five to six years.

In the near term, NYISO first priority in terms of resource scheduling will be pursuit of Excellence in Execution. Billing and settlements, however, also remain as strong priorities for the near term. The Market Evolution Plan does not attempt to identify project requirements, resources, or timetables for completion. This degree of specificity is impossible to develop at the early stages of market issue discussions. Already identified 2005 projects, as well as those to be prioritized in 2006, take precedence over any of the issues contained in this Plan.

At the June 24, 2005 Market Structures Working Group, the NYISO requested input from Market Participants on the Market Evolution Plan process and initiatives. This document reflects the input obtained as of 7/27/2005, and includes comments from the following individuals and organizations (identifiers for specific comments noted in parenthesis):

- NYS Dept. of Public Service - comments submitted by William Heinrich (PSC)
- Price Responsive Load Coalition – comments submitted by Rick Mancini (PRLC)
- Multiple Intervenors (MI)
- Consumer Power Advocates (CPI)
- NY Transmission Owners including NYPA and LIPA (TO)
- Calpine Energy Service L.P. (Calpine)
- Joint Supporters (JS)

(MI)- Multiple Intervenors has two comments with respect to this section of the Draft Plan. Initially, Multiple Intervenors notes that in detailing the "significant additions and improvements" implemented by the NYISO since market initiation, the first two items highlighted pertain to demand response and market monitoring initiatives Unfortunately, however, following this introduction, the Draft Plan proceeds to accord inadequate emphasis on future demand response and market monitoring initiatives. This flaw, which is discussed in greater detail below, should be remedied in future versions of the Draft Plan.

Second, Multiple Intervenors agrees with the NYISO's statement that: "In the near term, NYISO first priority in terms of resource scheduling will be pursuit of Excellence in Execution. Billing and settlements, however, also remain as strong priorities for the near term." While Multiple Intervenors has no objections to the NYISO engaging in long-term planning, in the short-term the NYISO's focus must be on increasing the accuracy and timeliness of its prices and bills, including improving its execution of market functions to ensure that errors similar to those that recently have plagued the NYISO, market participants and consumers do not occur in the future.

(JS) - The achievements of the NYISO with demand response resource (DRR) infrastructure are commendable, however they remain a work in progress.
Effective pricing signals for capacity, energy, ancillaries, including reserves, and reliability that can incent or motivate demand resources ultimately need to lead to the performance of DR assets on a near real-time basis. This is the only way that demand response is ever going to be treated as functionally equivalent to generation by system operators. There are both market-based and reliability-based opportunities for DR and DG that are not yet realized by the NYISO in its planning horizon and merit attention via the production of white papers and review by a wide group of market stakeholders during the planning process.

At times/days/hours of stress when DR is deployed for reliability purposes the incentive values should be realizable and not removable. The market price effects need greater definition and visibility.
More accurate approaches need to be developed for establishing capacity baselines. For example, the APMD methodology for capacity baselines does not interface well with the ICAP tag obligations for the customer by the Load Serving Entities. Options worthy of consideration might include a near term baseline more akin to the energy baseline presently employed by NYISO or what ISO-NE uses for capacity baselines.
Near real-time metering and communication systems may offer a way to greater transparency in the management of DR opportunities.

(PRLC) - The Market Evolution plan seems to be heavy with already identified issues and light on identifying long term needs.
The issues listed are in various states of evaluation/completion. Some issues need fundamental research, others require study, some are ready for a COO, while others may be near ready for coding into the system. Different NYISO resources may be required to address these issues. The issues/projects should carefully allocate all resources so portions of the process can be completed as soon as possible.

(TO) - We added a "first project" at the top of the list to reflect the TOs position at the joint Board/MC meeting last June, as presented by Terry Agriss. In summary, Ms. Agriss emphasized that before taking up the projects in the Evolution Plan the NYISO should address serious concerns on its performance and administration of the markets and rebuild confidence in its markets through accurate, correct and timely results. The TOs presented four basic recommendations to achieve accuracy in the markets:
o Improve control and audit processes
o Implement all market changes already approved by the MC and FERC
o When software changes are made, ensure that all programs are checked and not only work as intended but can handle all possible scenarios
o Instill a corporate culture that rewards people for getting things done right, and not just getting things done.
Among the projects that must be addressed before tackling those in the Evolution Plan are the following:
o Correcting SMD-2 issues found, including the 10-minute resource issue
o Ensuring that TCC markets work error free
o TCC automation
o Ensuring that the billing systems work accurately
o Complete current Final Bill closeout efforts
o ICAP automation

Criteria for Successful Market Design

In determining which long-term market enhancements to consider, the NYISO identified a number of criteria that define the characteristics of a successful market product:

Maintain and, where possible, enhance the effectiveness of short- and long-term price signals. As noted earlier, proper price signals are necessary to incent new development and support reliable operations. The NYISO has traditionally emphasized the importance of proper real-time prices, as these prices also drive all of the forward markets. Longer-term price signals, particularly in the capacity market, can drive new investment in infrastructure.

Minimize barriers to market entry. Programs should be designed to encourage the greatest participation from eligible resources. Where new supply or demand-side technologies exist, the NYISO should assess if and how these new resources can participate in electricity markets, and if new market products/designs/changes for these resources are justified.

(JS) - The planning process should facilitate the minimization of barriers to market entry. It is completely feasible that dispersed energy resource technology will undergo a series of transformations in the next decade, including for example several iterations of technology to facilitate widespread communication of load-related signals and operational instructions/feedback through for example Bluetooth and Son-of-Bluetooth systems. The NYISO planning process should be adaptive and should further influence the selection and design of technology for the NYISO itself, including new generations of IT technology.

Expand robust regional markets. Regional market expansion depends upon minimizing barriers to trade through elimination of rules such as through-and-out rates and individual ISO rules that prevent effective reciprocity. Market design discussions aimed at creating a set of uniform market products across all participating ISOs/RTOs (the Resource Adequacy Model process is one example) have evolved into initiatives that don't require identical constructs but allow similar products to be traded across regions. For example, one ISO may offer unique products for dispatchability that may not be mirrored in other ISOs, yet the ability for suppliers to trade across regions in more basic capacity products is not restricted.

Move unhedged costs into market prices where possible. Where possible, costs of providing wholesale electricity services should be visibly priced in the markets, thereby providing participants with clear price signals that can be hedged as needed. This argues for reducing uplift components to only those items that truly need to be socialized. Uplift costs that result from day-ahead commitment for local reliability may be one example of costs that could be reduced by restructuring the various passes of SCUC.

To the extent possible, maintain uniform rules for all participants. While special rules for some technologies are inevitable, market designs should seek to work with the same rule set for as broad a class of participants as possible. There are legitimate reasons for rules that differentiate among various providers, such as physical or technology limitations, but the basic market design should look to rule sets with broad applicability.

Simplify rules where possible. As the NYISO looks to long-term market design, it should standardize the practice of streamlining rules and market designs. Complexities introduce opportunities for error at all stages of design, development, implementation and execution. Realistically, some rule complexity is unavoidable to elicit proper market performance or recognize unique characteristics of particular technologies (a good example is the commitment and pricing rules for simple cycle gas turbines). A big advantage

to simplification is that it makes markets more understandable and accessible to potential market participants. Often, however, only experience gained with new market rules can identify complications and lead the designer to simpler alternatives. The NYISO must design systems to incorporate this delayed feedback.

Another aspect of rule simplification centers on the imposition of market performance penalties. Market penalties should be designed to incent correct behavior recognizing those factors that are under the participant's control, while not imposing penalties for consequences that are outside of the participant's control.

Take full advantage of technology developments. The successful implementation of SMD2.0 illustrates the benefits of updating outdated technology with the latest hardware and software. Market evolution needs to be consistent with the NYISO's information technology vision, which will keep abreast of the latest technology offerings. Some of the market changes contemplated (identified in the section below entitled Issues Requiring Further IT Advances) require significant improvements in algorithms, processor speed, and/or communications technologies before they can be fully implemented.

In addition to the drivers for new market features, it must be recognized that from time to time issues will emerge as a result of Federal and State regulatory initiatives or actions by the NYISO Board of Directors that will need to be added to the long-term evolution plan. The intent is to include them as part of the annual review of long-term market design issues, recognizing that they may take priority over others already targeted for implementation.

(MI)- In this section of the Draft Plan, the NYISO identifies a number of criteria "that define the characteristics of a successful market product." Multiple Intervenors does not oppose any of the general criteria identified, but contends that two additional criteria should be added.

First, the NYISO's market design should foster and promote demand response in all NYISO markets. Unlike other markets, electricity is an essential commodity that, as a practical matter, must be consumed by businesses and individuals when supplied, and for which there are no truly viable substitutes. For these reasons, it is essential that the NYISO's markets reflect a meaningful amount of demand response. As a member of the NYISO's Board of Directors ("Board") commented during a recent joint meeting between the Board and the Management Committee, in the absence of adequate demand response, the NYISO essentially is dealing with half a market at the present time. Multiple Intervenors recognizes that the criterion "Minimize barriers to market entry" references demand-side technologies. However, minimizing barriers for demand response to participate in the NYISO's markets – while meritorious – is not enough. The NYISO proactively should encourage and facilitate demand response wherever it would be beneficial. An important characteristic of "a successful market product" is the presence of meaningful demand response, and the Draft Plan should be modified to reflect this characteristic.

Second, an important characteristic of a successful market is the absence of inappropriate attempts to exercise market power, and sufficient penalties to "incent" correct behavior. Unfortunately, this section of the Draft Plan does not reference market monitoring and mitigation processes, and this omission should be remedied. The NYISO proposes that market products "[t]ake full advantage of technology developments." However, as technology

becomes more sophisticated, it also becomes increasingly important that the resources and tools allocated to market monitoring efforts "keep up" with other aspects of market design. As the NYISO's past history demonstrates, even a one-day delay in addressing inappropriate market behavior can cost consumers tens of millions of dollars. A market product will not be truly successful unless, inter alia, market participants and consumers in general are convinced that the resulting prices are the result of true competition, unimpaired by inappropriate exercises of market power.

System and Market Landscapes, 2007-2011

In considering the spectrum of market design issues, it is useful to place them within the context of changes in system infrastructure, regulatory actions, and business conditions expected over the next several years. It is reasonable to assume that these conditions will play a prominent role in shaping the future of the NYISO's markets.

As noted in NYISO's PowerTrends 2005, demand for electricity will grow at a modest rate, averaging 1.2 percent annually statewide. 2038 MW of new generation are currently under construction, with an additional 6763 MW of generation projects approved for construction under the now expired Article X siting process. A total of 1946 MW of generator retirements have been announced.

In 2008, the expected in-state capacity reserve margin is predicted to fall below the 118 percent installed capacity requirement, exclusive of SCRs and imports; New York City and Long Island capacity is projected to be substantially below current locational requirements.

At this writing, over 5000 MW of windpower projects are currently identified in the NYISO interconnection queue, much of it located in Western New York. New York's Renewable Portfolio Standard (RPS) has set a target of 25% of NY's electricity consumption from renewable resources, chiefly windpower, small-scale hydro, and biomass projects.

Apart from windpower, much new construction is based on natural gas combined cycle technology, tending to reduce fuel diversity and placing ever greater reliance on the natural gas transmission and distribution networks and facilities. The future price of fuels will play a large role in determining which technologies are chosen for new construction, and may also alter the types of units on the margin.

While several merchant transmission facilities have been proposed both within NY and across control area boundaries, only the Cross-Sound Cable project is operating. The 600 MW Neptune HVDC project linking Long Island with PJM has been licensed through NY's Article VII process.

FERC's approval of the NYISO's Comprehensive Reliability Planning Process provides a long-term mechanism for addressing new facilities for reliability needs; an Economic Planning Process is currently under discussion by NYISO stakeholders.

Several new and proposed environmental rules such as the Federal Clean Air Interstate Rule (CAIR), New York's implementation of a mercury rule, modifications to New York's NO_x and SO_2 budget trading programs, and proposed rules governing emission of greenhouse gases can potentially have cumulative impacts on New York's fuel mix.

In its Statement of Policy on Further Steps Toward Competition in Retail Energy Markets issued on 8/25/2004, the New York PSC reaffirmed its commitment to fostering competition whenever possible through steady progress in retail access program design and incentive ratemaking. Increasing the ability for retail customers to see and react to spot market electricity prices will ultimately increase needed demand-side flexibility, which in turn will have an impact at the wholesale level.

(JS) - This should be a fundamental objective of the NYISO planning process with respect to DR resources.

End-State Market Vision

Ultimately, the longer-term changes envisioned by the NYISO should draw the markets toward an end-state design with the following characteristics:

Competitive, liquid markets. The markets should engage a significant percentage of potential market participants, thereby increasing competition and sending correct price signals for all derivative markets.

Ability to hedge positions in energy and capacity markets. With visible prices and uplift costs minimized, participants should have access to necessary hedge instruments (such as cross-border congestion hedges) that cover most if not all of the risk factors associated with wholesale electricity markets.

Improved market certainty and efficiency. Reduced uplift and better price signals should improve price certainty.

Opportunities for merchant transmission, demand side response and distributed energy resource alternatives. Tomorrow's markets will need to increasingly recognize the contributions of these resources. Future markets, including the capacity market, will need to accommodate merchant transmission facilities both internal to NY and across borders. Demand response resources, currently involved only in the day-ahead energy market,

could provide additional services in reserves and real-time energy markets. Distributed energy resources, currently participating in New York's markets through demand response programs, could be integrated directly into the energy markets.

(JS) - Demand resources currently participate in the capacity and reliability markets in addition to the Day-ahead energy market. Opportunities should be strengthened for DR, including DG to participate more fully in capacity, reserves, and RT energy markets. The planning process should accelerate these opportunities and raise them from the lower value category to the higher value category.

Effective, efficient and fair credit policies. While the NYISO has substantially streamlined credit requirements while maintaining accountability, it is possible that future markets will place greater emphasis on forward instruments, such as longer-term capacity options. Credit requirements need to be developed in these markets that will permit entry to new participants, tied to well-defined milestones to ensure effectiveness. On a broader scale, credit policies will need to be consistent with new markets and new types of entrants.

(JS) - Credit policy is an extremely important and sensitive issue for Demand Response market entrants. Longer term capacity options from DR resources should receive high priority in the development of forward instruments. Credit restrictions should be carefully examined for their potential impacts on DRR. The Northwest Power Coordinating Council is now working in some respects with 20-year capacity planning horizons for DR resources and is employing simulations of that length for DRR as the IEA DRR initiative.

Regional coordination of day-ahead and real-time markets. Consistent with the objective that all ISOs/RTOs need not embrace a single market design, it is not necessary for multiple ISOs/RTOs to operate on common platforms. In fact, it may be desirable to have multiple platforms for strategic diversity. It is important for the ISOs/RTOs to continue their efforts to improve coordination of inter-area transactions.

(MI)- One of the characteristics identified by the NYISO in its end-state market vision is: "Opportunities for merchant transmission, demand side response and distributed energy resource alternatives." Multiple Intervenors agrees with the NYISO's statement that: "Demand response resources, currently involved only in the day-ahead energy market, could provide services in reserves and real-time energy markets." However, the NYISO should not be satisfied with the current level of participation of demand response resources in the day-ahead energy market. Unlike the NYISO's two reliability-based demand response programs, the current lone economic program – the Day-Ahead Demand Response Program ("DADRP") - currently suffers from inadequate participation and there is a need for an allocation of additional resources by the NYISO to further develop and broaden the program. As detailed, infra, the NYISO needs to devote more resources – and adopt as a high priority – the continued development and expansion of demand response programs, including the DADRP as well as proposals to integrate demand response into reserves markets.

(CPA)- While CPA supports these goals, we are concerned that the recommendations of the Plan do not. Specifically, Enhanced Demand Response/DG Participation, Treatment of Distributed Generation and Virtual Trading in NYC Load Pockets have all been identified as

"Lower Value Market Issues." The Candidate 2006 Product Enhancements document includes no projects for these important areas for 2006. Our members believe that demand response and resolution of NYC load pocket pricing issues are critical to market efficiency in NYC and in the State generally. Further, while we recognize that the recent Management Committee decision to make the DADRP and EDRP programs permanent was an important step, it is equally important to improve these programs to maximize participation and remove barriers to participation as experience develops. For these reasons, CPA supports increased emphasis on demand side and DG programs, as well as on virtual trading for NYC load pockets, in the 2005 Market Evolution Plan.

Section II – Evaluation Approach

In developing~~–~~ its list of those initiatives to be targeted first for discussion, the NYISO divided the list of market initiatives into three categories:

1. Those issues that deliver a high value return based on:
   - meeting criteria for successful market design
   - ability to address the changing market landscapes faced by the NYISO, and
   - reflecting one or more aspects of the NYISO's end-state market vision

2. Issues that fall short of meeting one or more of the criteria noted above (Lower-value Issues)

3. Concepts that require further advancement in IT state-of-the-art before they can be realistically implemented

Grouping Enhancements

In reviewing the full spectrum of long-term market design issues facing the NYISO, it is helpful to divide them according to their primary market focus:

- Initiatives that are meant to enhance market convergence across two or more ISOs/RTOs (Regional Market Initiatives)

- Initiatives whose primary benefit will be to improve internal New York market efficiency (NY Market Efficiency Initiatives) or improve internal NYISO processes

Regional Market Initiatives
The identified set of Regional Market Initiatives will bring the NYISO and neighboring ISOs/RTOs closer to the concept of a Northeast Regional Market where products are freely traded, markets are closely coordinated, and a common user interface is used throughout the virtual region. As described in the NYISO 2004 Strategic Plan:

Establishment of a "virtual regional market" will mean that customers receive most of the benefits of a larger regional market through seams resolution and coordination of operations and markets among independent ISO/RTOs.

This concept will deliver many improvements including:

- *Improving the efficiency of the real-time and day-ahead energy markets,*
- *Reducing or eliminating uneconomic barriers to trade,*
- *A common data exchange protocol for the markets,*
- *Supporting the ability of Market Participants to hedge congestion across control area boundaries,*
- *Faster and more accurate settlements across markets,*
- *Potential reductions in ancillary services costs, and*
- *Building support for robust energy futures markets*

The long-term objective is that the participants in individual Northeast (NYISO, ISO-NE, PJM, IESO) markets interact unencumbered by unnecessary differences in market rules and operating practices.

Experience has shown that the degree of difficulty in addressing seams issues increases by the number of markets involved. Political issues and processes are often more difficult to manage compared with the effort spent to develop successful technical solutions. Consequently, the NYISO believes that, when establishing the priority of regional issues, a three-step process should be followed:

- ***Agreement on focus***. Each participating ISO needs to establish the desirability of a regional market initiative and convey that priority to adjacent regional markets.
- ***Competing initiatives***. Affected ISOs/RTOs need to set regional priorities in conjunction with stakeholders with respect to internal initiatives.
- ***Acquiring buy-in from state and federal regulators***. ISOs/RTOs need to effectively communicate the priority and importance of specific regional market enhancements to state and federal regulators.

NY Market Efficiency Initiatives

The NY Market Efficiency Initiatives address enhancements to the energy, ancillary services, TCC and ICAP markets, several at the suggestion of Market Participants. As noted in the NYISO 2004 Strategic Plan:

The motivation for investing resources to improve the efficiency of the NYISO markets is directly related to the original goals of deregulation of

the Electricity Markets. The promise of deregulation was to foster both short-term efficiency and to provide effective long-term price signals to encourage needed investment in generation, transmission, and demand response resources.

Future market improvements should reduce costs that cannot be easily hedged by Market Participants and improve the clarity, certainty, and quality of the price signals being produced by the NYISO spot markets. We presume that a large, liquid, and efficient spot market run by the NYISO will lead to sufficient price transparency as required to support robust forward and futures markets for electricity and related products.

(MI)- In this section of the Draft Plan, the NYISO divided its proposed list of market initiatives into the three categories. The first category is comprised of "[t]hose issues that deliver a high value return based on: [i] meeting criteria for successful market design, [ii] ability to address the changing market landscapes faced by the NYISO, and [iii] reflecting one or more aspects of the NYISO's end-state market vision." The second category is comprised of "[i]ssues that fall short of meeting one or more of the criteria noted above (Lower-value issues)." Finally, the third category is comprised of "[c]oncepts that require further advancement in IT state-of-the-art before they can be realistically implemented."

The NYISO's categories may not represent the best means of prioritizing or classifying potential projects. For example, a market initiative may be extremely important to stakeholders and fulfill a critical need yet, if it delivers "a high value return" based only on two of the three criteria in the first category, it would be deemed a "Lower-value issue" and fall into the second category. Additionally, the categories do not address initiatives that are required, or encouraged strongly, by the Federal Energy Regulatory Commission ("FERC"). For instance, in prior orders FERC has directed the NYISO to implement certain initiatives (e.g., incorporating demand response into reserves markets) - those initiatives "automatically" should be accorded a very high priority because the NYISO is subject to a directive to implement them.

Next, the NYISO proposes that in evaluating long-term market design issues, it is helpful to organize them as to whether they are regional initiatives or initiatives internal to New York. At this time, it is not clear how such an organizational approach would assist in the prioritization of multiple initiatives. Clearly, the scope of impacts likely to result from an initiative should be a consideration. The degree of difficulty associated with implementing an initiative successfully also should be considered. However, grouping potential initiatives into "Regional" and "New York Specific" categories does not appear, in and of itself, to assist in the necessary prioritization.

(JS) - The long-term price signals needed to foster demand response resources include capacity/reliability payment throughout the marketplace. The emerging presence of much potential windpower in Western New York should not depress capacity markets for other, potentially more stable capacity resources from other DRR technology. Locational value recognition for DRR resources continues to be highly important.

Section III – Market Issues Discussion

This section provides an alphabetical summary of the issues considered as part of the long-term market evolution plan.

High Value Market Issues

Market Efficiency

- **Develop Market Mechanisms to Induce Load Following** – Currently the NYISO does not provide an explicit market signal to encourage those suppliers that are capable of providing load following to participate as flexibly scheduled suppliers in its energy market. Instead, the NYISO , relyies on the implicit incentive, provided in the real-time energy market, of maximizing profitable dispatch for those units scheduling as flexible suppliers. With the changing fuel mix, emissions restrictions that reduce unit operating ranges, and a projected modest increase in load following requirements due to the addition of wind power, it may be beneficial to recognize load following as a distinct market characteristic and provide explicit compensation to those suppliers which provide it.

  (Calpine) - Compensation of load following service through an explicit market mechanism is very important because it will improve the system-wide optimization of generation commitment and dispatch and hence increase market efficiency, enhance reliability, and decrease fuel usage. Further, it should not have to require restrictions on the bid package of generators to coerce provision of this service from some generators as a condition of their offer to sell energy into the spot market.

  (JS) - DRR resources should be seriously considered in developing these market mechanisms and not just treated as an afterthought. There may not be much there, but who knows - whole operations may be structured to accelerate or diminish in response to load following signals.

  (TO) – Low Priority - No evidence that implicit compensation is inadequate to induce development of sufficient LF capacity.

- **Import Rights Allocation Process** – Currently, the NYISO provides ICAP Import Rights for External ICAP on a first-come first-served basis. Work on this initiative would include developing an alternative process to recognize the value of such Import Rights and present a process for administering them, presumably via an auction or other mechanism that would give all interested and qualified parties a reasonable and fair opportunity to facilitate trade of ICAP/UCAP between control areas.

  (TO) – High Priority - Expect this to be taken care of before 2007—so why is it in the MEP?

- **Market Design Verification** - Market simulation is becoming a viable tool to test and verify new market features. It can assist the NYISO in providing an estimate of the economic efficiency of new market features and assessing whether those benefits exceed implementation costs. Simulation can also be used to (i) facilitate a decision when experts disagree; (ii) answer critics of deregulation with concrete results; (iii) support market design proposals; and (iv) expose market flaws or instances of market power. The testing of new market features during the design stage will reduce risks of market

Inefficiencies. Simulation would allow the NYISO to analyze the impact of unforeseen bidding behavior or unlikely scenarios before they appear, leading to a reduction in risk.

(MI)- With respect to the goal identified as "Market Design Verification," Multiple Intervenors is concerned that the description appears to limit the goal of testing and verifying the impact of various market design to new features. However, there are certain features of the NYISO's existing markets – such as the Installed Capacity Demand Curves – that were implemented as experiments and still require thorough evaluations. In the case of the Demand Curves, FERC has insisted on additional analyses and, therefore, it is critical that the NYISO or an independent consultant undertake a comprehensive and unbiased evaluation of the Demand Curves.

(JS) - Market simulation of DRR resources is advancing rapidly as employed by both the Northwest Power Coordinating Council and the International Energy Agency's Demand Response Resources project currently underway. Results should be available with the planning window under consideration here.

(TO) – High Priority - But can we have more info? Doesn't RTS include a test mode that's intended to do this?

- **Minimum Run/Down Times Over Midnight** - The current day-ahead scheduling system does not honor a generator's minimum run time parameter if it would extend the generator's operation past midnight. The discontinuity at midnight potentially results in increased uplift, divergence between day-ahead and real-time prices, disincentives to generation expansion, and sub-optimal use of resources.

(TO) – High Priority - Should also consider commitment of units with start-up time of > 24 hours. Currently causes need for SREs over weekend in NYC.

- **Scheduling and Dispatch Rules Assessment** - There is a need to evaluate the relationship between the needs and purposes for regulation, load following, 15 minute flexible, self scheduled and fixed supply and the associated compensation and penalty rules.

(TO) – High Priority - Probably a good idea—but just what does it entail? Is it just a study, or is something else included? Other projects may emanate from this study and should be assessed separately. Should precede development of LF market.

- **SCUC Local Reliability Rule Pass Changes** – The NYISO is currently evaluating the costs imposed by the additional commitment of units in the Local Reliability Rules (LRR) pass of the Day-Ahead Market. If shown to be a significant factor in uneconomic commitment, a redesign of the multiple pass evaluation of the Day-Ahead Market could result in more efficient scheduling.

(TO) – High Priority - Need to clarify that an assessment of the significance of this issue first.

- **TCC End-State Auction Model** - The end state TCC auction would be a multi-period auction, simultaneously evaluating bids and offers for TCCs of varying durations. Software to run the end state auction has been received. However, two matters must be addressed before the end state auction is realized:
  - The design of the auction and its settlements must be reevaluated in light of operating experience gained during the past five years and the multi-period capability being proposed;
  - A new bid/post system is required to cope with the additional data handling burden that is expected with the auction's new flexibility.

  (TO) – Low Priority - Doesn't seem to be as high a priority in light of other items in this list.

- **Unforced Capacity Deliverability Rights (UDRs) for AC Transmission** - UDRs for Controllable Lines was the first phase of a longer range plan to give value to merchant transmission. The second phase of that evolution will be to determine market rules for free-flowing AC transmission. This task will scope out the rules and processes to be used for valuing the capacity of any transmission lines that will impact the statewide IRM or Locational ICAP requirements and that would not be constructed with the benefit of a regulated rate of return (i.e. Merchant Transmission)

  (TO) – High Priority - Don't believe this should require substantial resources.

- **Wind Forecasting and Scheduling** - New York's adoption of an RPS implies the possibility that NYISO may need to accommodate in excess of 3,000 MW of wind power by 2013. Given the variability of wind project output, it is essential that NYISO day-ahead and real-time commitment processes be provided with estimates of wind farm production. This initiative will assess options for forecasting statewide wind output and incorporating such forecasts in SCUC and RTC.

  (TO) – High Priority - May need to do this sooner than 2007, given RPS schedules.

Regional Market Enhancements

- **Cross-Border Congestion Hedges** - A cross-border congestion hedge would permit participants in the wholesale electric markets operated by the NYISO and other control areas to guard against price differences between their respective markets.

  (TO) – High Priority - Needs to stabilize cost of cross-border power delivery—not just congestion component. How does this work in connection with other procedures to resolve seams issues?

- **Cross-Border Controllable Line Scheduling (post-CSC, 1385)** - This initiative would develop the necessary user interface, scheduling and settlement software needed to accommodate controllable ties that span two control areas (external controllable lines). Initial cross-border controllable line capability is being implemented as part of project A619, specifically for the Cross Sound Cable. The initial implementation will provide baseline capabilities for future controllable line implementations however it is expected that most future lines will require additional customization to address unique requirements.

  (TO) – High Priority - Need to do this sooner than 2007. The ISO has a fundamental responsibility to Transmission Owners to accommodate new transmission, just as it has to generator owners to accommodate new generation - even if new technologies have unique characteristics.

- **Elimination of Rate Pancaking w/PJM** - following on the elimination of rate pancaking with ISO-NE in 2004, the NYISO plans to work with its counterparts in PJM to bring together the stakeholders needed to develop a similar agreement between PJM and the NYISO.

  (MI) - Although Multiple Intervenors strongly supports the goal of eliminating rate pancaking with PJM Interconnection, LLC ("PJM") and agrees that it is a High Value Market Issue, Multiple Intervenors is concerned that by including this issue in the Draft Plan, which is focusing on the 2007-2011 time period, the NYISO is indicating that it does not expect the goal to be achieved until at least 2007. That would not be an acceptable outcome. The NYISO should make every effort possible, including a FERC filing if negotiations with PJM are not productive in a timely manner, to eliminate rate pancaking with PJM in 2005 or 2006.

  (TO) – High Priority - Expect an agreement between NYISO and PJM regarding elimination of pancaking to be reached before 2007. Clarify whether this item pertains to the development of software needed to effectuate such an agreement.

- **Inter-Market Congestion Management (gain experience w/PJM/MISO approach)** - Investigate a methodology to address improved inter-regional congestion management, similar to that of the PJM-MISO congestion management protocol. This process would result in improved regional market efficiencies in the form of minimizing regional re-dispatch costs associated with transmission constraints.

  (TO) - Need better understanding of what's proposed. How does this relate to ITS? To cross-border hedges?

- **Intra-Hour Transaction Scheduling (beyond pilot, conceptual design)** - NYISO and ISO-NE are currently working with stakeholders to evaluate the concept and implementation strategy of ITS and alternatives. Following the pilot program and subsequent assessment of future testing and implementation issues, some larger-scale implementation of ITS or

alternative real-time inter-market price-convergence approach may be undertaken. This effort will also need to look at the ramifications of multi-control-area ITS or equivalent.

(PSC) - We would oppose any attemts at lowering this ranking or dragging this out any longer. We just observed and are frustrated by our exporting from SMD2's $1800 price to PJM's $200 price and there's nothing we can do about it. This problem is costing a lot and has been for too long.

(TO) - High Priority - Many concerns need to be addressed. ISO needs to assess whether proxy buses currently selected will cause truly economic transactions to be rejected—because the redispatch to serve an export does not occur at the proxy bus location—or will cause uneconomic transactions to be scheduled. Other issues occur as well—for example, inaccurate load forecasts may undermine any efficiency gains, and there are concerns that generator dragging may cause prices to increase in the exporting control area.

- **Virtual (financial) Bidding at Proxy Buses** – The introduction of virtual trading within New York resulted in better convergence of day-ahead and real-time prices. This initiative would look at extending virtual bidding to include the proxy buses of adjacent control areas, providing better information to the day-ahead market scheduling software.

(TO) - Need further information. Isn't virtual bidding already permitted at proxy buses? What else is needed here? Does it have something to do with inter-control area agreements?

Lower Value Market Issues

Market Efficiency

- **Enhanced Demand Response/DG Participation** - Demand resources can most effectively participate in the day-ahead market – how do we encourage / educate these resources to increase participation? There are also opportunities for demand response providers in the reserves and regulation markets that may benefit from alternative communications approaches.

(MI)- Multiple Intervenors disagrees strongly with the proposed categorization of "Enhanced Demand Response/DG Participation" as a Lower Value Market Issue. Expanding demand response, and increasing participation in the NYISO's demand response programs, should be one of the NYISO's highest priorities. In order for the NYISO's markets to be truly competitive, there needs to be a material amount of demand response. Otherwise, as one NYISO Board member remarked recently, you are dealing with half a market. Increased demand response would improve: (i) "the competitiveness of the NYISO's markets; (ii) the efficiency of the markets; and (iii) the reliability of the State's electric system.
According to the Draft Plan, High Value Market Issues are those issues that deliver a high return based on: (i) "meeting criteria for successful market design"; (ii) "ability to address the changing landscapes faced by the NYISO"; and (iii) "reflecting one or more

aspects of the NYISO's end-state market vision." Even if this definition of a High Value Market Issue is preserved, it is not clear to Multiple Intervenors why, or how, "Enhanced Demand Response/DG Participation" does not satisfy all of the requisite criteria. Regardless of how issues are categorized in subsequent versions of the Draft Plan, improving demand response should be accorded the highest level of priority within the NYISO, consistent with FERC directives.

Additionally, Multiple Intervenors is concerned with the description of "Enhanced Demand Response/DG Participation," which includes the following sentence: "There are also opportunities for demand response providers in the reserves and regulation markets that may benefit from alternative communications approaches." While Multiple Intervenors does not disagree with that sentence, it is concerned with its inclusion in the Draft Plan, which is supposed to be focusing on the 2007-2011 time period. FERC previously has directed the NYISO to facilitate demand response providers' participation in the reserves markets. The NYISO should be working on this matter now, with a targeted implementation date of later this year or 2006, at the very latest.

In short, the NYISO needs to make demand response a much higher priority. Shortly after it commenced operations, the NYISO became a recognized national leader on demand response issues, and its emergency demand response programs have evidenced strong participation and assisted the NYISO to maintain reliability on peak demand days. Multiple Intervenors respectfully urges the NYISO to rededicate itself to increasing demand response in its markets and this renewed focus should be reflected in future versions of the Draft Plan.

(JS) - DRR resources should be examined carefully for consideration as providers of high value return and should not be lodged at the level of lower value issues. Given the increasing interest of end-users in the installation of DG systems as well as a growing interest in DR programs we respectfully suggest that this is in fact an area that should see further action on an expedited basis. Specifically, we believe that a coordinated marketing campaign with local utilities along with ESP's serving the areas involved along with streamlined sign-up procedures would greatly increase market participation in these programs.

(PRLC) – How was this determination made? In the Joint Board and Management Committee meeting, one Board member noted that the NYISO is only half the Market until Demand Response fills an appropriate role in the Market design (my paraphrase). Demand Response/DG Participation should be ranked higher than "Lower Value Market Issues".
These should be 3 separate issues reviewed:
o Shorter Term – What are the current obstacles to Market Participation in the EDRP, SCR/ICAP, and DADRP? Items such as testing requirements and call notifications, need to be reviewed along with other items that may be impediments to the programs.
o Mid Term - the NYISO needs to assist in evaluating the potential for certain Demand Response programs based on the industrial and commercial resources in New York State. Certain industries may be able to benefit from certain forms of Demand Response better than others. Voltage Support, and other ancillary services need to be reviewed for participation by Demand Response Resources in addition to the opportunities in the Energy Market
o Long Term - In addition to reviewing the current potential, the NYISO, should also consider reviewing the potential for new technologies that can support future Demand Response. Since Demand Response tends to be limited to periods when resources are scarce and/or prices are high, appropriate programs need to be in place well in advance of the need. Relatively small changes in load at critical periods can have a significant change in prices to all Load Serving Entities.

(TO) – Low Priority - Increased DR is important—but this proposal will do little to encourage it.

- **Internal Controllable Lines** - The concept of operations for general methodology to schedule HVDC controllable lines within NY borders was approved by NY Stakeholders in 2004. This initiative would develop the necessary user interface, scheduling and settlement software needed to accommodate controllable lines internal to NY.

(TO) – High Priority - Ought to complete scoping software at this time. Actual software development can wait until there is a need for it.

- **Nodal Pricing for Load** – Are there reasons to consider moving from a zonal to nodal representation for loads?

(JS) - In principle nodal pricing for load would permit DRR resources to realize greater value in varisous situations. This is an area that requires further review and careful study.

(TO) – Low Priority - Concerns that additional metering inputs and changes in B&A software will make this prohibitively difficult. Also—isn't this already permitted on an opt-in basis.

- **On-Peak, Off-Peak TCC Blocks** - Some Market Participants have suggested that offering on- and off-peak TCC blocks would facilitate hedging and improve TCC value by both generators and loads due to distinct off-peak and on-peak volumes.

(TO) – Low Priority - No need to complicate TCC markets further.

- **Resource Adequacy - Long-Term Voluntary Market** - This effort would consider additional / longer-term capacity products that provide proper signals for capacity addition.

(JS) – We completely agree wit the basic principle stated throughout this document that proper price signals are imperative for a market to function properly. To that end we agree that the addition of longer term capacity products that provide proper signals for capacity addition should be reviewed over time.

(PSC) - This is ranked low. I'm not sure if NYISO would have ranked it high had PJM filed its RAM proposal with a 4 year forward purchase requirement or not. If they do we'd probably rank this urgent, and even if PJM doesn't file that it seems to us that should market participants be able to work through a relatively simple voluntary auction design the potential benefit of a forward price signal and market liquidity would be worth it relative to a modest cost to run periodic auctions

(TO) – High Priority - In addition, some believe that the ISO should consider development of a market that would procure sufficient capacity to meet capacity requirements several years in advance, thereby eliminating the need for a demand curve in the current short-term market. Others prefer the current approach..

- **TCC Options on Boundaries** – as a means to fully hedge congestion at the borders, it would be necessary to develop TCC options. The existing TCC obligations would not generally be suitable since transactions across borders often flow in both directions.

  (TO) - Need to understand what would be entailed. Understanding is that this should not be too difficult to implement, as long as the number of locations at which options are defined is limited.

- **TCCs for Transmission Expansion** - Develop a permanent methodology for granting TCCs for free-flowing AC transmission expansion. Expansion TCCs will provide financial reward to those entities committing to transmission upgrades. It would be logical to investigate the benefits of TCC Options for expansions as part of this effort.

  (PSC) - As you're probably aware we've raised this recently in the ESPWG context as we first and foremost want market based solutions to have a running shot at addressing needs, and this would be an integral part. My recollection was that LECG was looking at some modeling issues but Susan Pope didn't think we were that far away from a solution.

  (TO) – High Priority - We see this as a critical part of the market design, to give MPs market-based incentives for development of transmission expansion.

- **Treatment of Distributed Generation** – Behind-the-fence generation currently participates in the NYISO markets through EDRP or as ICAP SCR. Advances in equipment, metering and communications technologies are tending to make distributed generators (including fuel cells) an attractive option for businesses. The NYISO and its stakeholders need to take a broad look at how these resources can participate in the NYISO, particularly in the energy markets. There is also potential for before-the-meter applications in distribution and local area transmission application that can eliminate or defer system reinforcements.

  (JS) – We agree that wholeheartedly that DG is becoming an increasingly attractive option for businesses. In fact, this holds true for all classes of end-users, not just businesses. We further agree that the NYISO needs to look broadly at how these resources can participate, particularly in ISO energy markets and in the before-the-meter applications mentioned above. Furthermore, given the urgency of the situation that the downstate region faces with respect to the need for new generation/T&D assets, we urge the NYISO to expeditiously review this matter. In addition, we respectfully suggest that research into the IT and other issues this raises be expedited so that the benefits this significant and growing resource offers can be fully realized as soon as practical.

  (TO) – Low Priority - Why does treatment of DG need to differ substantially from treatment of any other generator?

- **Virtual Trading in NYC Load Pockets** - Significant congestion is seen internal in the NYC Load Pockets. Expanding Virtual Bidding to the Load Pocket level could allow arbitraging and therefore price stability. This initiative will investigate a software solution to evaluate virtual bidding in

NYC load pockets, updates to the necessary procedures to accommodate the change, and any required changes to the billing and invoicing systems.

(JS) – Given the success seen to date with "virtual bidding" in other areas, this would appear to be a ripe area for exploration. However, given the implications, we see this as another area where a long term review would need to be conducted before we could comment more fully on what the eventual opportunities could be along with what issues it could create.

Regional Market Enhancements

- **Impact of External Transmission Outages on Congestion Rent Shortfalls and ICAP Markets** - In the TCC auctions that it conducts, the NYISO permits bidders for TCCs to specify external proxy generator buses as the injection or withdrawal locations. Transmission outages or deratings occurring outside of the NYCA that are not anticipated at the time of a TCC auction can force the NYISO to reduce the assumed transfer capability between the NYCA and the adjacent control area. If the resulting set of TCCs are rendered infeasible, the NYISO will incur congestion rent shortfalls in the day-ahead market. There is currently no way to assign the cost impact (due to the congestion rent shortfall) of that outage to the responsible external transmission owner. In addition, transmission outages or deratings that cause reductions in transfer capability between regions may have an impact on ICAP sales and deliverability between regions.

  (TO) – High Priority - Currently, the NYTOs are assigned these costs, even though they have no control over these outages. At the least, mechanisms ought to be put in place that will stop this practice. Allocation of these costs to the external TO would also be desirable but may be a later stage of project development. Additionally, the NYISO needs to ensure that ICAP import limits are stated in reasonable manner, as opposed to stating restrictions on ICAP imports that are intended to benefit the source control area.

- **Inter-Area Transaction Deliverability per ISO-MOU ICAP Principles** – RTOs/ISOs need to review their corresponding ICAP rules to be sure that all inter-area ICAP transactions are scheduled and managed on a comparable basis. Comparable and reciprocal rules must exist for day ahead transactions, curtailments, short notice transaction such as SREs, and emergency transactions during reserve shortages.

  (TO) – High Priority - Need to ensure that adjoining control areas are not placing barriers on the ability of their resources to supply ICAP to NY. Should not consume significant resources and should be performed before 2007.

- **Modeling of Netted Transactions at NYISO-HQ Interface** - Currently, real-time imports from HQ are limited to 1200 MW based upon NY first contingency criteria. Day-ahead and real-time scheduling software recognizes a 1500 MW limit at the NY-HQ proxy bus comprised of imports, exports and wheel-throughs. The lack of separation of wheel-throughs and

exports from imports can restrict imports such that line flow is below 1200 MW. One solution that has been suggested would create a second proxy bus model at the interface, which would be used to schedule only wheel-through transactions; the first proxy bus would be used to schedule imports/exports up to a net level of 1200 MW.

(TO) - Don't believe implementation should be difficult. Would like to know why ISO felt it was low.

- **Reserves Participation in Adjacent Regional Markets** - There has been some market participant interest in the ability to sell operating reserves from NY to ISO-NE. This effort would evaluate the complexity and desirability of such an arrangement. As with similar efforts, it is expected that this would focus on one specific external control area initially, with follow-on as appropriate.

(JS) – The long-range implications of this could be significant, with it being unclear if there would be a net benefit to New York. We therefore suggest that before any specific actions are recommended that further review of the implications be conducted so that any future benefits can be better evaluated.

(TO) – High Priority - This would permit reduction in seams-related inefficiency in adjoining OR markets. Ought to evaluate this further to determine whether what operational considerations preclude this—if any.

Issues Requiring Further IT Advances

- **Better PAR Models** – This initiative would look at improved phase angle regulator models for day-ahead and real-time commitment.

(TO) - Need to understand what is envisioned before we can assess whether it can be done from a technical perspective.

- **ELR MWhr Bidding Capability** - Energy Limited Resources can currently be scheduled for more hours in the Day-Ahead Market than the resource can provide in a single bidding day. This initiative would provide a software solution to allow MWHR limitations to be applied during scheduling, updates to the necessary procedures to accommodate the change, and any required changes to the billing and invoicing systems.

(TO) - Don't understand why this is not technologically feasible. Current procedures for managing output of ELRs seem to work fairly well.

- **Full AC Solution for Day-Ahead & Real-Time Commitment** – There would be advantages to explicit modeling of system voltage constraints compared with the current practice of modeling voltage constraints as MW flow limits.

The processing time required to implement such a solution, particularly for real-time commitment, may be prohibitive.

(Calpine) - A full AC solution for day ahead and real time commitment will clearly provide for the most complete optimization while providing the best opportunity for the LBMPs to reflect all system operating requirements. This is both efficient and involves large dollar volumes. It has been well documented that impediments in information technology have been a major reason for delaying the implementation of this. However, today it is feasible and thus should be implemented as soon as possible.

(TO) – High Priority - Don't believe that processing time should be prohibitive—particularly given the new computers the ISO will be acquiring. ISO should assess the necessary changes, their cost, and their effect on processing time, as well as quantifying the impact of not doing this on market efficiency.

- **Regional Day-Ahead Market** - A regional day-ahead market would look at some degree of regional contingency analysis and commitment modeling as well as sequenced operation of real-time scheduling processes and inter-ISO transaction evaluations. This process would be aided by a single interface and schedule submission process for inter-ISO transactions.

(JS) - While this potentially could offer many benefits, given the complexities of the issues involved and the impact it would have, we view this as an item that requires considerable study and review before any action should be taken.

(TO) – Low Priority - Don't see why it's infeasible. But it's probably not advisable, given the other needs.

- **Voltage Support Service** – This initiative would look at alternatives to the existing var support payments that might include dynamic response capability, on-peak, off-peak requirements, enhanced metering requirements, etc.

(TO) – Low Priority - Don't see why it's infeasible. But it's probably not advisable, given the other needs.

Additional Initiatives Provided by Transmission Owners

Proxy Bus Pricing at PJM *– High Priority - Doesn't correctly recognize the ability for power to flow over PAR-controlled lines and therefore incorrectly represents price of an additional MW at the PJM proxy bus.*

Modifications to Attachment N *– High Priority - These modifications fall into two categories. One category constitutes software changes needed to permit cost allocation procedures to function more effectively. For example, the procedures the ISO has proposed depend upon SCUC to calculate shift factors, but SCUC will not calculate shift factors for constraints that are not binding. The ISO has proposed a patch, which would be used until the necessary changes to SCUC are made. Second, the simplifications the ISO has proposed to Att. N will need to be reviewed on an ongoing basis to assess whether they can be refined, so that the assignment of costs to TOs is more consistent with cost causation principles, and also to assess*

whether inadvertent cross-subsidization of outages/derates by restorations/uprates is occurring.

***Review of Real-Time Commitment Procedures** – High Priority - Under changes recently approved by FERC, RTD will be given access to 10-minute resources, but while this is better than preventing RTD from committing these resources, RTD is not a commitment model and is unlikely to do as good a job of committing these resources as would a true commitment model. The ISO should assess the performance of the fix it is installing after the end of this summer and evaluate whether additional changes can and should be made to improve the quality of real-time commitment. One possibility that has been suggested is more frequent operation of RTC.*

***Elimination of Multi-Pass Day-Ahead Commitment** – Precluded due to software considerations - The "SCUC Local Reliability Rule Pass Changes" addressed the possibility of re-ordering the SCUC passes to yield a more efficient commitment. Nevertheless, multi-pass commitments will still be less optimal than a procedure that simultaneously determines DAM schedules and ensures that all security constraints can be met. A multi-pass procedure was adopted for SCUC because software did not exist that could minimize the cost of meeting one level of load (the bid level) while ensuring that sufficient generating capacity was available to meet another level of load (the forecast level), but the ISO should continue to monitor the state of the art in software development to assess whether it might become possible to eliminate the multi-pass approach. (Another reason for adopting the multi-pass approach was cost allocation, and we would need to address that before eliminating the multi-pass SCUC.)*

Section IV – Translating the Market Evolution Plan into Future NYISO Business Plans

The complete list of market design initiatives will be reviewed by Market Participants through the Market Structures Working Group, Business Issues Committee, Operating Committee, and Management Committee with a view toward obtaining consensus on the level of value offered by each issue. The NYISO intends to do this in parallel with discussions on 2006 projects, and will revise the list as necessary to reflect input from each group. The NYISO proposes that the conceptual design for these initiatives be vetted through white papers prepared by NYISO staff, its consultants, and market participants in the 2006-2007 timeframe.

Consistent with the NYISO's project prioritization process, those initiatives that emerge as likely candidates for future projects will require a preliminary cost/benefit analysis. Those with the most compelling cost/benefit analyses will be prioritized as projects in the 2007 and beyond timeframe. Some initiatives may have limited support and/or costs well in excess of the anticipated benefits and may be dropped from further consideration in the plan.

(Calpine) - In general, we believe that the point at which quantitative cost-benefit analysis is first done occurs too late in the process. If the pre-selection of which proposed projects will receive any cost-benefit analysis occurs before any quantitative cost-benefit analysis at all is done, the projects to be further considered will merely be those selected by pure "party line" voting. This proposed process is inconsistent with the intended purpose of the cost-benefit analysis -- which is to assure the market efficiency and implementation effectiveness improvement goals set forth by the NYISO. Thus, we suggest that the process include at least

a preliminary, basic quantitative cost-benefit cut for all proposed projects up-front -- before they are voted on by market participants.
Conducting such analysis requires a proper understanding of what is meant by "cost-benefit". We believe there are actually two measures to be considered here. The first is the degree to which an existing issue places costs or risks for which no benefit is offered. For example, if a market rule or procedure requires a market participant to bear a cost, or force exposure to a risk, for which no reasonable opportunity exists for that cost or risk to be compensated for, the cost to benefit ratio would be infinitely high. We understand that there may also be a higher priority -- where the total dollar magnitude of benefit (or avoided cost or risk) exceeds costs by a significant amount (a triaging of sorts). Thus, it is important early in the process to explain how each measure will be considered. For example, while it may be a higher priority for an item ranking very high in the latter to be addressed promptly, a lower ranking item in the second measure should still be on the list if it ranks high on the first measure where the burden (risk or cost that should either be avoidable or compensated) to benefit (opportunity to be compensated for assuming burden) ratio is high.

(MI)- Multiple Intervenors generally supports cost/benefit analyses as an input into project prioritization. Importantly, however, the results of such analyses should not be the only consideration. For instance, the NYISO may be directed, or encouraged strongly, by FERC to modify certain aspects of the current market design. Additionally, some projects simply may be the right thing to do, and it may be difficult to evaluate them properly on a quantitative basis (e.g., participation may be unknown until a program is made available; using historical pieces to quantify "benefits" may produce misleading results by underestimating future impacts and ignoring qualitative benefits). Thus, while cost/benefit analyses should be conducted where appropriate, decisions as to which projects ultimately are implemented and the priority assigned to such projects should not be decided solely on the basis of quantitative analyses.

(PRLC) - There may be certain issues that warrant higher priority even though they do not meet all the "Criteria for a successful Market Design". Consider putting a 1 to 10 weighting on each of your criteria and use the total from each criteria to determine the ranking. Also rankings should be broken down further by the NYISO resources impacted. Monies to support consultant evaluations, internal manpower resources, and equipment additions may be other criteria to help rank the priority of the issues.

The NYISO Market Evolution Plan is intended to serve as a living document that reflects the general importance and urgency of market design enhancements. Each year, the NYISO Business Plan will reflect the outcome of the market evolution plan review process. As needs change, new market design initiatives are identified and new cost/benefit analyses emerge, the annual market evolution plan will be re-evaluated and its outcome reflected in subsequent NYISO Business Plans.