

**RULES TO ALLOCATE RESPONSIBILITY  
FOR THE  
COST OF NEW INTERCONNECTION FACILITIES**

*(Final Draft for BIC Meeting on 5/24/01)*

**I. Interconnection Standard**

- A. Each New Interconnection\* above 10 MW, connecting at 115 KV or above, that is proposed by a generation developer, transmission developer or load (each a “Developer”)\*\* must meet the New York ISO Minimum Interconnection Standard for reliability described in the System Reliability Impact Study Criteria and Procedures approved by the Operating Committee on July 19, 2000.
1. The NYISO Minimum Interconnection Standard is designed to ensure reliable access by the proposed project to the New York State Power System. The NYISO Minimum Interconnection Standard does not impose any deliverability test or deliverability requirement on the proposed project.
    - a. Consequently, these rules are not intended to address in any way the allocation of responsibility for the cost of Network Upgrades and other new facilities associated with transmission service and the delivery of power across the Transmission System, the reduction of Transmission System Congestion, economic transmission system upgrades, or the mitigation of Transmission System overloads associated with the delivery of power.
    - b. It is not anticipated that the installation of any interconnection facilities covered by these rules will improve the deliverability of power, reduce Congestion, or mitigate overloads associated with the delivery of power. If the installation of any facilities by a Developer does improve deliverability, reduce Congestion and create Incremental Transmission Congestion Contracts, or mitigate overloads, then that situation will be

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\* The defined terms used in these rules are listed in Appendix 1 and defined therein, or in the referenced document.

\*\* A Transmission Owner that has constructed a reliability-based transmission or distribution system upgrade, or an upgrade pursuant to an order issued by a regulatory body requiring such construction, will not be deemed to be a Developer under these rules because of the construction of that upgrade.

handled in accordance with the relevant provisions of the NYISO Open Access Transmission Tariff, including Section 19, and applicable FERC precedent.

- c. The NYISO Staff and Market Participants will work together to develop detailed rules like these to allocate responsibility for the cost of new facilities associated with transmission service, power delivery, the reduction of Congestion, economic transmission system upgrades, and the mitigation of overloads associated with the delivery of power.

## **II. Interconnection Facilities**

- A. The interconnection facilities covered by these cost allocation rules are those required for the proposed project to reliably interconnect to the transmission system in a manner that meets the NYISO Minimum Interconnection Standard.
- B. The interconnection facilities covered by these cost allocation rules are comprised of the following two types of facilities:
  - 1. Attachment Facilities. These are the facilities that are constructed for the sole benefit of the Developer's individual project, to physically attach that project to the existing transmission system. Examples of Attachment Facilities are depicted in Exhibit 1.
  - 2. System Upgrade Facilities. These are the modifications to the existing transmission system that are required to maintain system reliability in response to changes in the system, including such changes as load growth, changes in load patterns, and proposed interconnection projects. In the case of proposed new interconnection projects, System Upgrade Facilities are the modifications or additions to the existing transmission system that are required for the proposed project to reliably interconnect to the system in a manner that meets the NYISO Minimum Interconnection Standard.

## **III. Cost Responsibility Rules**

- A. These cost allocation rules will not supersede any binding cost allocation agreements that have been executed between or among Developers and Transmission Owners prior to the effective date of these rules; provided, however, that no such prior agreement will alter the cost responsibility, as determined by these rules, of any Developer or Transmission Owner who is not a party to such prior agreement.
- B. The interconnection facility cost allocated by these rules is comprised of all costs and overheads associated with the design, procurement and installation of the new interconnection facilities. These rules do not address in any way the allocation of

responsibility for the cost of operating and maintaining the new interconnection facilities once they are installed. Nor do these rules address in any way the ownership of the new interconnection facilities. At the present time, operating and maintenance costs and ownership of interconnection facilities are covered in the Interconnection Agreement between a Developer and its Connecting Transmission Owner.

- C. Neither Developers nor Transmission Owners will be charged directly for any redispatch cost that may be caused by the temporary removal of transmission facilities from service to install new interconnection facilities, as such cost is reflected in Locational Based Marginal Prices. Nor will existing generators be paid for any lost opportunity cost that may be incurred when their units are dispatched down or off in connection with the installation of new interconnection facilities.
- D. Attachment Facilities. Each Developer is responsible for 100% of the cost of the Attachment Facilities.
- E. System Upgrade Facilities. The cost of System Upgrade Facilities is first allocated between Developers and Transmission Owners, and then the Developers' share of the cost is allocated among Developers in accordance with the rules that are discussed below in this Section III.E.
  - 1. Cost Sharing Between Developers and TOs. The cost of System Upgrade Facilities is allocated between Developers and Transmission Owners based upon the results of an Annual Transmission Baseline Assessment of the five-year need for System Upgrade Facilities. The Annual Transmission Baseline Assessment will be initiated by Transmission Owners, and conducted by the Transmission Owners and NYISO Staff. To ensure that all affected parties have an opportunity to provide their input, the Annual Transmission Baseline Assessment will be reviewed by the Transmission Planning Advisory Subcommittee, and its effectiveness will be subject to the approval of the Operating Committee. When the Transmission Planning Committee is established to participate in the process used to prepare the NYISO Consolidated Transmission Plan, then that Committee will replace the role of the Transmission Planning Advisory Subcommittee.
    - a. The purpose of the Annual Transmission Baseline Assessment is to identify the System Upgrade Facilities that each Transmission Owner will need to install during the five-year period covered by the Assessment to reliably meet the load growth and changes in the load pattern projected for its Transmission District.
      - (1) Procedure for Annual Transmission Baseline Assessment. The procedure used to identify the System Upgrade Facilities needed by each Transmission Owner will ensure that the

facilities in each Transmission District, alone or collectively, are sufficient to reliably serve existing load and meet load growth and changes in load patterns in compliance with NYSRC Reliability Rules, NPCC Basic Design and Operating Criteria, NERC Planning Standards, NYISO rules, practices and procedures, and local transmission owner criteria\* (collectively “Applicable Reliability Requirements”). The procedure will be:

- (a) Under the Annual Transmission Baseline Assessment, each Transmission Owner will develop baseline system improvement plans with the NYISO Staff. These improvement plans will use NYISO data\*\* to project system load growth and changes in load patterns, including those that reflect demand side management, and will identify the System Upgrade Facilities needed year-by-year for the baseline system to reliably serve projected load in the Transmission Owner’s Transmission District for a five-year period. The Annual Transmission Baseline Assessment will identify each System Upgrade Facility project, its anticipated in-service date, and the status of the project (in construction, budget approval received, budget approval pending).
- (b) The Annual Transmission Baseline Assessment will identify the System Upgrade Facilities needed by each Transmission Owner to reliably meet projected load growth and changes in load pattern without the interconnection of any proposed Developer projects, except for those proposed projects to which interconnection facility costs have already been allocated. When interconnection facility costs have been allocated to proposed Developer projects using these rules, then those projects and related upgrades

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\* These local criteria were included in the NYISO 2001 Annual Transmission Planning and Evaluation Report (FERC Form No. 715), which may be found on the NYISO web site at <http://www.nyiso.com/services/planning.html>.

\*\* NYISO Load and Capacity Data Book may be found on the NYISO web site at <http://www.nyiso.com/services/planning.html>.

will be added to the baseline system studied in the next Annual Transmission Baseline Assessment.

- (c) NYISO Staff will perform thermal, voltage, and stability analyses to determine the normal and emergency transfer capabilities of the statewide baseline system.
- (d) NYISO Staff will perform MARS analysis of the baseline system to verify that the baseline system meets Applicable Reliability Requirements. The LOLE will be reported for the entire state and for each of the New York zones.
- (e) If the transmission or generation facilities in a Transmission District are insufficient to meet Applicable Reliability Requirements, then the responsible Transmission Owner will be required to develop feasible solutions, including identifying needed System Upgrade Facilities that are sufficient to either interconnect additional generic generation or increase transmission transfer capability into the Transmission District in order to satisfy the Applicable Reliability Requirements.
- (f) If the baseline system meets Applicable Reliability Requirements, the NYISO Staff will perform short circuit analysis to determine whether there is sufficient interrupting capability in the proposed plans. If there are any breaker overloads, the responsible transmission owner will determine a plan to mitigate the short circuit overloads. A reassessment of Steps (c) through (e) may be required if the plan impacts the transmission transfer capability of the system. The results of the short circuit analysis will be treated in the same manner as the results of thermal, voltage and stability analyses for all purposes under these cost allocation rules.
- (g) Each Annual Transmission Baseline Assessment conducted by Transmission Owners and NYISO Staff will be reviewed by the Transmission Planning Advisory Subcommittee and its effectiveness will be subject to the approval of the Operating Committee. When the Transmission Planning Committee is established to participate in the process used to prepare the NYISO

Consolidated Transmission Plan, then that Committee will replace the role of the Transmission Planning Advisory Subcommittee. Each Annual Transmission Baseline Assessment will be completed by a date to ensure that such Assessment can be presented for review and final NYISO Committee approval during February.

- (h) Each most recently completed Annual Transmission Baseline Assessment will be reviewed the following year by the Transmission Owners and NYISO Staff and updated, as necessary, following the criteria and procedures described herein.

- 2. With the exception of those upgrades that were previously allocated to Developer projects, Developers are not responsible for the cost of any System Upgrade Facilities that are identified in the Annual Transmission Baseline Assessment, or any System Upgrade Facilities that resolve in whole or in part a deficiency in the system identified in the Annual Transmission Baseline Assessment.

**[Minority Position language to substitute for all of the text in this Section III.E.2: Developers are not responsible for the cost of any System Upgrade Facilities that are identified in the Annual Transmission Baseline Assessment, with the exception of those upgrades that were previously allocated to Developer projects.]**

- 3. Developers are responsible for 100% of the cost of the minimum amount of System Upgrade Facilities, not already identified in the Annual Transmission Baseline Assessment, that are needed as a result of their projects, and required for their projects to reliably interconnect to the transmission system in a manner that meets the NYISO Minimum Interconnection Standard. The System Upgrade Facilities necessary to accommodate Developer projects will be determined by the individual System Reliability Impact Studies and the Annual Transmission Reliability Assessment. The criteria and procedures that will be followed to conduct the Annual Transmission Reliability Assessment are discussed below.
  - a. “Minimum Amount of System Upgrade Facilities” means the least costly configuration of commercially available components of electrical equipment that can be used, consistent with Good Utility Practice, to construct the System Upgrade Facilities required for the projects to meet the NYISO Minimum Interconnection Standard.

- b. If a Transmission Owner elects, for whatever reason, to construct System Upgrade Facilities that are larger or more extensive than the minimum facilities required to reliably interconnect the proposed project, then the Transmission Owner is responsible for the cost of those System Upgrade Facilities in excess of the Minimum Amount of System Upgrade Facilities required by the Developer projects.
- 4. The System Upgrade Facilities cost for which a Developer is responsible will be determined on a “net” basis; that is, the Developer’s System Upgrade Facilities cost will be determined net of the benefits, or System Upgrade Facility cost reductions, that result from the construction and operation of its project and the related upgrades. The net cost responsibility of a Developer will not be less than zero. Also, the cost responsibility of the Transmission Owner for System Upgrade Facilities will be no greater than it would have been without the Developer’s project.
  - a. The purpose of this approach is to allocate to the Developer the responsibility for the cost of the net impact of its project on the needs of the transmission system for System Upgrade Facilities. Thus, a Developer is responsible for the cost of the System Upgrade Facilities that are required by, or caused by, its project. A Developer is not responsible for the cost of System Upgrade Facilities that would be required anyway, without the construction of its project. If a Developer’s project reduces the cost of System Upgrade Facilities that would be required anyway, that beneficial cost reducing impact will be recognized.
  - b. The net System Upgrade Facilities cost and cost reduction benefits of a Developer’s project are determined by comparing the results of an Annual Transmission Baseline Assessment with the corresponding Annual Transmission Reliability Assessment.
  - c. The net System Upgrade Facilities cost and cost reduction benefits of a Developer’s project are comprised of those costs and cost reduction benefits caused by (1) the construction of System Upgrade Facilities not contained in the Annual Transmission Baseline Assessment, and (2) eliminating or reducing the need for the construction of System Upgrade Facilities contained in the Annual Transmission Baseline Assessment, due to the construction of System Upgrade Facilities associated with the proposed project.
  - d. The Developer’s net cost responsibility will be determined using constant dollars. That is, when netting the cost of System Upgrade Facilities required for its project, as identified in the Annual

Transmission Reliability Assessment, with those identified in the Annual Transmission Baseline Assessment, the cost of System Upgrade Facilities in the out-years of the Annual Transmission Baseline Assessment and the out-years of the Annual Transmission Reliability Assessment will be discounted to a current year value for netting. The cost of out-year System Upgrade Facilities will be discounted to a current value using the weighted average cost of capital of the Connecting Transmission Owner.

**[Minority Position language to substitute for all other text in this Section III.E.4: Developers and Transmission Owners are free to negotiate a shared savings to the Developer’s System Upgrade Facilities costs if the Developer’s project and corresponding system upgrades reduce the cost of the Transmission Owner’s system upgrades. However, the cost allocation rules are not intended to obligate any Transmission Owner to share such savings with any Developer.]**

5. Cost Allocation Among Developers. The Developers’ share of the cost of System Upgrade Facilities is allocated among Developers based upon the NYISO Annual Transmission Reliability Assessment. The Annual Transmission Reliability Assessment will be conducted by NYISO staff, in cooperation with affected Market Participants, in accordance with Applicable Reliability Requirements, in accordance with criteria and procedures approved by the Operating Committee. To ensure that all affected parties have an opportunity to provide their input, the Annual Transmission Reliability Assessment will be reviewed by the Transmission Planning Advisory Subcommittee, and its effectiveness will be subject to the approval of the Operating Committee. When the Transmission Planning Committee is established to participate in the process used to prepare the NYISO Consolidated Transmission Plan, then that Committee will replace the role of the Transmission Planning Advisory Subcommittee. The Annual Transmission Reliability Assessment will begin on March 1 each year, with a planned completion date six months after that.
  - a. Each Annual Transmission Reliability Assessment will update the results of System Reliability Impact Studies that have previously been performed for certain proposed interconnection projects.
    - (1) A System Reliability Impact Study will be updated, and a project included in the Annual Transmission Reliability Assessment for a given year (a “Class Year”), if (a) the Operating Committee has approved the System Reliability Impact Study for the project, and (b) state regulators have determined that the Article X, Article VII or comparable



permitting application for the project is complete, before the NYISO Staff begins the Annual Transmission Reliability Assessment on March 1 each year. In 2001, projects satisfying these requirements on or before May 1 will be included in the Annual Transmission Reliability Assessment for the Class Year of 2001.\*

- b. The Annual Transmission Reliability Assessment will update System Reliability Impact Study results in accordance with the System Reliability Impact Study Criteria and Procedures approved by the Operating Committee on July 19, 2000.
- c. The Annual Transmission Reliability Assessment for each Class Year will include an identification of the Minimum Amount of System Upgrade Facilities required for those projects.
  - (1) The Annual Transmission Reliability Assessment will specifically take note of any System Upgrade Facilities that are already included in an Annual Transmission Baseline Assessment.
- d. For interconnection projects included in each Annual Transmission Reliability Assessment, the System Reliability Impact Study updated results will specify the impact of each project in the Class Year on the reliability of the transmission system, that is, the pro rata contribution of each project in the Class Year to each of the individual System Upgrade Facilities identified in the updates.
  - (1) The pro rata impact of each project in the Class Year on the reliability of the transmission system will not simply be based upon the number of projects in the Class Year.
  - (2) Instead, the impact of each project in the Class Year will be stated in terms of its pro rata contribution to the total electrical impact on each individual System Upgrade Facility in the Class Year of all projects that meet the minimum Material Impact criteria of Section III.E.5.e.(1) of these rules. The contribution to electrical impact will be measured in various ways depending

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\* The projects included in the Class Year of 2001 as of 5/1/01 are listed in Exhibit 2. The Athens and Bethlehem projects have been studied together, in a manner consistent with these rules, in the Annual Transmission Reliability Assessment for 2000. Consequently, these two projects will be included in the baseline system to be studied in the Annual Transmission Reliability Assessment for 2001.

on the nature of the transmission problem primarily causing the need for the individual System Upgrade Facility.

- (a) Contribution to short circuit current for interrupting duty beyond the rating of equipment.
  - (b) Contribution to MW loading on the critical element for thermal overloads under the test conditions that cause the need for a System Upgrade Facility. MW contribution will be calculated by multiplying the associated distribution factor by the declared maximum MW of the project. The distribution factor is calculated by pro rata displacement of New York System load by the added generation.
  - (c) Contribution to voltage drop on the most critical bus for voltage problems. A critical bus will be defined as representative for voltage conditions during a specific contingency. The pro rata impact of each project is measured as the ratio of the voltage drop at the critical bus caused by the project when none of the other projects are represented, to the voltage drop at the critical bus when all of the projects in the Class Year are represented.
  - (d) Contribution to transient stability problems as measured by the fault current calculated for the most critical stability test that is causing the need for the System Upgrade Facility.
- e. No Developer is responsible for any of the cost of any individual System Upgrade Facility if his project does not have a Material Impact on the reliability of the transmission system, that is, if the project does not make a material contribution to the need for that System Upgrade Facility.
- (1) “Material Impact” is defined in terms of any one of the following\* :

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\* Examples of the computations that will be used to determine material impact are shown in Exhibit 3.

- (a) Short Circuit Contribution: Equal to or greater than 2% of the existing rating of the equipment that needs to be replaced.
  - (b) Thermal Loadings: Equal to or greater than a 5% distribution factor on the most limiting monitored element under the most critical contingency that is causing the need for transmission improvements. For monitored facilities 345 kV and above (including transformers with high side voltage of 345 kV or above) this cutoff factor is 7.5%.
  - (c) Voltage Effects: Equal to or greater than 5% of the voltage drop occurring with all Class Year projects.
  - (d) Stability Effects: Equal to or greater than 2% of the fault current for the most critical stability test that is causing the need for the System Upgrade Facility.
  - (e) The exception to the above definition of Material Impact may occur when no Developer's project reaches the Material Impact criteria listed above, but the cumulative effect of a group of new developments requires transmission facilities improvements. In this instance the above Material Impact cutoffs are replaced with *de minimus* cutoffs of 100 amperes short circuit or stability fault current contribution, or 10 MW thermal contribution, or 2% of the voltage change at the most critical bus.
6. There will be no prioritization of the projects grouped and studied together. Each such project will share in the then currently available electrical capability of the transmission system, and share in the cost of the System Upgrade Facilities required to interconnect its respective project, in accordance with the rules set forth herein.
7. Based on the Annual Transmission Reliability Assessment update of System Reliability Impact Study results, the Developer of each interconnection project included in the then current Annual Transmission Reliability Assessment will be given a dollar figure for its share of the cost of the minimum amount, or least costly configuration, of System Upgrade Facilities required for reliable interconnection of the project to the transmission system. The Developer of each interconnection project will also be given a dollar figure for the total cost of the minimum amount of System Upgrade Facilities required for reliable

interconnection of the project. Each Developer will also be given a description of the required System Upgrade Facilities, their expected in-service date, and a plan for their installation that is sufficient to verify these dollar figures. Each Developer will be given this information as soon as practicable prior to the submittal of the Annual Transmission Reliability Assessment to the Transmission Planning Advisory Subcommittee or the Transmission Planning Committee, as applicable.

8. Following approval of the Annual Transmission Reliability Assessment by the Operating Committee, each Developer will have 45 calendar days to (a) accept the cost figure for its share of the System Upgrade Facilities, or (b) not accept the cost figure for its share of the System Upgrade Facilities.
  - a. If the Developer accepts the cost figure, it must signify its willingness to pay the Connecting Transmission Owner for its share of the required System Upgrade Facilities by posting security for the full amount of the cost figure within the same 45 calendar day time period. “Security” means a bond, irrevocable letter of credit, parent company guarantee or other form of security from an entity with an investment grade rating, executed for the benefit of the Connecting Transmission Owner, meeting the requirements of these cost allocation rules, and meeting the commercially reasonable requirements of the Connecting Transmission Owner. Security shall be posted to cover the period ending on the date on which full payment is made to the Connecting Transmission Owner for the System Upgrade Facilities; provided, however, that Security may be posted with a term as short as one year, so long as such Security is replaced no later than 15 days before its stated expiration. In the event Security is not replaced as required in the preceding sentence, the Connecting Transmission Owner shall be entitled to draw upon the Security and convert it to cash, which cash shall be held by the Connecting Transmission Owner for the account of the Developer.
  - b. If the Developer does not accept the cost figure, the System Reliability Impact Study for its project will be removed from the then current Annual Transmission Reliability Assessment, to be updated in the manner described herein in a subsequent Annual Transmission Reliability Assessment, after the project has received its Article X certificate, Article VII certificate or comparable permit from state regulators.
  - c. Notwithstanding the provisions of Section III.E.8.b., if a Developer does not accept the cost figure, that Developer may elect one time, and only one time, to have its project removed from the then current Annual Transmission Reliability Assessment, to be updated in the next Annual

Transmission Reliability Assessment. The one-time election by a Developer of this Section III.E.8.c. alternative will in no way otherwise affect the application of these rules to its project.

- d. Whenever projects are removed from a Annual Transmission Reliability Assessment, NYISO staff will immediately notify the Developers of the remaining projects still included in the Annual Transmission Reliability Assessment.
9. For those remaining Developer projects that continue to be included in the then current Transmission Reliability Assessment, the System Reliability Impact Study updated results will be adjusted, as necessary, to reflect the impact of any project removals.
10. When Annual Transmission Reliability Assessment results are adjusted, revised cost figures will be provided to the remaining affected Developers. Each remaining Developer will be given revised dollar figures for its share of the cost, and for the total cost, of the minimum amount of System Upgrade Facilities required for reliable interconnection of the project. Each remaining Developer will also be given a description of the required System Upgrade Facilities, their expected in-service date, and a plan for their installation that is sufficient to verify its revised cost figure. Each remaining Developer will have 30 additional calendar days from its receipt of the revised cost figure to (a) accept the revised cost figure for its share of the System Upgrade Facilities, or (b) not accept the revised cost figure for its share of the System Upgrade Facilities.
  - a. If the Developer accepts the revised cost figure, it must signify its willingness to pay the Connecting Transmission Owner for its share of the required System Upgrade Facilities by modifying its previously posted Security to cover the full amount of the revised cost figure within the same additional 30 calendar day time period.
  - b. If the Developer does not accept the revised cost figure, its interconnection application will be considered withdrawn, and will be terminated. Any further development of the same project will require a new interconnection application. Any Security previously posted on a terminated interconnection project will be subject to forfeiture. The Security will be available to defray the cost of the System Upgrade Facilities required for the projects still included in the Transmission Reliability Assessment, but only as described below.
11. Once a Developer has accepted a revised cost figure and posted Security for that amount, or in those instances where all the Developers in a Class Year accept their initial cost figures, once a Developer has accepted an initial cost

figure and posted Security for that amount, then the accepted figure caps the Developer's maximum potential responsibility for the cost of System Upgrade Facilities required for its project, except for circumstances involving errors of estimation, as discussed below.

- a. If the actual cost of the Developer's share of required System Upgrade Facilities is less than the agreed-to and secured amount, the Developer is responsible only for the actual cost figure.
- b. If the actual cost of the Developer's share of required system Upgrade Facilities would be greater than the agreed-to and secured amount because other projects have been expanded, accelerated, otherwise modified or terminated, then the Developer is responsible only for the agreed-to and secured amount for its project. The additional cost is covered by the Developers of the modified projects, in accordance with these cost allocation rules, or by the drawing on the security instruments that have been forfeited on terminated projects, depending on the factors that caused the additional cost. Forfeited Security will be drawn on only as needed for this purpose, and only to the extent that the terminated project associated with that Security has caused additional cost.
- c. If the actual cost of the Developer's share of required System Upgrade Facilities is greater than the agreed-to and secured amount because of errors of estimation concerning its project that are not within the control of the Connecting Transmission Owner (such as, for example, cost escalation of materials or labor, or changes in the commercial availability of physical components required for construction), the Developer will then pay the overage to the Connecting Transmission Owner. However, to the extent that some or all of the excess cost is due to factors within the control of the Connecting Transmission Owner (such as, for example, additional construction man-hours due to Connecting Transmission Owner management, or correcting equipment scope deficiencies due to Connecting Transmission Owner oversights), then that portion of the excess cost will be borne by the Connecting Transmission Owner. Disputes between the Developer and the Connecting Transmission Owner concerning errors of estimation will be resolved by those two parties in accordance with the terms and conditions of their Interconnection Agreement.

12. If a Developer pays for any System Upgrade Facilities, or for any Attachment Facilities that are later determined to be System Upgrade Facilities, that create electrical capacity or "Headroom" in excess of the electrical capacity actually used by its project, then that Developer will be repaid the depreciated cost of

that headroom by the Developer of any subsequent project that interconnects and uses the Headroom within ten years of the creation of the headroom.

- a. Developers of terminated projects who have paid for Headroom with forfeited security instruments, as well as Developers of completed projects who have paid for Headroom, will be repaid in accordance with these rules.
- b. The Developer of the subsequent project shall repay the prior Developer as soon as the cost responsibilities of the subsequent Developer are determined in accordance with these rules.
- c. The depreciated cost of the System Upgrade Facilities associated with the Developer-created Headroom will be determined using the FERC-approved depreciation schedule applied to comparable facilities by the Connecting Transmission Owner.
- d. Developer-created Headroom will be measured in accordance with these rules. The use that a subsequent project makes of Developer-created Headroom, that is, the reliability impact that a subsequent project has on the transmission system, will also be measured in accordance with these rules.

13. A Developer creating Headroom will not be compensated for the use of that headroom that results from subsequent load growth or changes in load patterns.
14. Developers are not charged for their use of any rate base facilities, except to the degree applicable as customers taking service in accordance with the rates, if any, that apply to those facilities.

- F. Going Forward. Once a Developer has posted Security for its share of the Minimum Amount of System Upgrade Facilities required for its project, then that Developer has no further responsibility for the cost of additional Attachment Facilities and System Upgrade Facilities that may be required in the future.
1. The project Interconnection Agreement executed between a Developer and its Connecting Transmission Owner will reflect the Developer's responsibility for the cost of new Attachment Facilities and System Upgrade Facilities, as that responsibility has been determined in accordance with these rules.
  2. The cost of those additional Attachment Facilities and System Upgrade Facilities needed for future interconnection projects will be shared between future Developers and Transmission Owners, and allocated among future Developers, in accordance with the rules.

- G. Nothing in these rules restricts the rights of any person under the OATT, or the right of any person to file a complaint with the Federal Energy Regulatory Commission under the relevant provisions of the Federal Power Act.



## APPENDIX 1

### Defined Terms Used In Cost Allocation Rules

**Annual Transmission Baseline Assessment** – Has the meaning set forth in Section III.E.1.

**Annual Transmission Reliability Assessment** –Has the meaning set forth in Section III.E.5.

**Applicable Reliability Requirements** – Has the meaning set forth in Section III.E.a.(1).

**Article VII Certificate** – The certificate of environmental compatibility and public need required under Article VII of the New York State Public Service Law for the siting and construction of a major new transmission facility.

**Article X Certificate** – The certificate of environmental compatibility and public need required under Article X of the New York State Public Service Law for the siting and construction of a new electric generating facility with 80 MW or more of capacity.

**Attachment Facilities** – Has the meaning set forth in Section II.B.1.

**Class Year** – Has the meaning set forth in Section III.E.5.a.(1).

**Confidential Information** – (OATT) Information and/or data which has been designated by a Transmission Customer to be proprietary and confidential, provided that such designation is consistent with the ISO Procedures and the OATT, including the attached Code of Conduct.

**Congestion** – (OATT) A characteristic of the transmission system produced by a constraint on the optimum economic operation of the power system, such that the marginal price of Energy to serve the next increment of Load, exclusive of losses, at different locations on the Transmission System is unequal.

**Connecting Transmission Owner** – The Transmission Owner to whose system the Developer proposes to interconnect.

**Developer** – Has the meaning set forth in Section I.A.

**Good Utility Practice** – (OATT) Any of the practices, methods or acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods or acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost

consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to delineate acceptable practices, methods, or acts generally accepted in the region.

**Headroom --** Has the meaning set forth in Section III.E.13.

**Incremental Transmission Congestion Contracts – (OATT)** A set of point-to-point Transmission Congestion Contract(s) allocated to the Transmission Customer or Transmission Owner that is paying for a Network Upgrade or Direct Assignment Facilities. Incremental TCCs are point-to-point TCCs that derive from the increase or decrease in Interface Total Transfer Capability resulting from the Network Upgrade or Direct Assignment Facilities.

**Locational Based Marginal Pricing (“LBMP”)** – (OATT) A pricing methodology under which the price of Energy at each location in the NYS Transmission system is equivalent to the cost to supply the next increment of Load at that location (*i.e.*, the short-run marginal cost). The short-run cost takes Generation Bid Prices and the physical aspects of the NYS Transmission System into account. The short-run marginal cost also considers the impact of Out-of-Merit Generation (as measured by its Bid Price) resulting from the Congestion and Marginal Losses occurring on the NYS Transmission System which are associated with supplying an increment of Load. The term LBMP also means the price of Energy bought or sold in the LBMP Markets at a specific location.

**LOLE –** Loss of Load Expectation, referred to in Section III.E.1.a.(a).

**Market Participant – (OATT)** An entity, excluding the ISO, that produces, transmits, sells, and/or purchases for resale Capacity, Energy and Ancillary Services in the Wholesale Market. Market Participants include: Transmission Customers under the ISO OATT, Customers under the ISO Services Tariff, Power Exchanges, Transmission Owners, Primary Holders, LSEs, Suppliers and their designated agents. Market Participants also include entities buying or selling TCCs.

**MARS Analysis –** Multi-Area Reliability Simulation analysis, referred to in Section III.E.1.a.(1).

**Material Impact –** Has the meaning set forth in Section III.E.5.e.

**Minimum Amount of System Upgrade Facilities –** Has the meaning set forth in Section III.E.3.a.

**NERC Planning Standards –** Planning Standards of the North American Electric Reliability Standards, referred to in Section III.E.1.a.(1).

**Network Upgrades – (OATT)** Modifications or additions to transmission facilities that are integrated with and support the Transmission Owner’s overall Transmission System for the general benefit of all users of such Transmission System.

**New Interconnection** – The criteria for determining whether or not a proposed generation or transmission project is to be deemed a New Interconnection that must meet the NYISO Minimum Interconnection Standard were approved by the Operating Committee on February 14, 2001. The criteria may be found on the NYISO web site at <http://www.nyiso.com/services/planning.html>.

**New York State Power System** – (OATT) All facilities of the NYS Transmission System, and all those Generators located within the NYCA or outside the NYCA, some of which may from time-to-time be subject to operational control by the ISO.

**NPCC Basic Design and Operating Criteria** – The system Design and Operating Criteria of the North east Power Coordinating Council, referred to in Section III.E.1.a.(1).

**NYISO Consolidated Transmission Plan** – The plan developed by the transmission planning process described in Section VI.G., and Attachment II, of the filing letter for the NYISO RTO Compliance filing with FERC.

**NYISO Load and Capacity Data Book** – The “Gold Book”, published annually by the NYISO, pursuant to Section 6-106 of the Energy Law of New York State.

**NYISO Minimum Interconnection Standard** – The reliability standard applied to proposed interconnection projects, as described in the System Reliability Impact Study Criteria and Procedures.

**NYISO OATT** – (OATT) The NYISO Open Access Transmission Tariff.

**NYISO Procedures** – (OATT) The procedures adopted by the ISO in order to fulfill its responsibilities under the ISO OAT, the ISO Services Tariff and the ISO Related Agreements.

**NYSRC Reliability Rules** – The Reliability Rules of the New York State Reliability Council, referred to in Section III.E.1.a.(1).

**Operating Committee** – (OATT) A standing committee of the NYISO created pursuant to the NYISO Agreement, which coordinates operations, develops procedures, evaluates proposed system expansions and acts as a liaison to the NYSRC.

**Security** – Has the meaning set forth in Section III.E.8.a.

**System Reliability Impact Study** – The study, conducted pursuant to Section 19B of the OATT, to determine what interconnection facilities are needed for a Developer’s proposed interconnection project to reliably interconnect to the Transmission System in a manner that meets the NYISO Minimum Interconnection Standard.

**System Reliability Impact Study Criteria and Procedures** –The Criteria and Procedures for conducting a System Reliability Impact Study. These Criteria and Procedures were approved by the Operating Committee on July 29, 2000.

**System Upgrade Facilities** – Has the meaning set forth in Section II.B.2.

**Transmission District** – (OATT) The geographic area served by the Investor-Owned Transmission Owners and LIPA, as well as the customers directly interconnected with the transmission facilities of the Power Authority of the State of New York.

**Transmission Owner** – The New York public utility or authority (or its designated agent) that owns facilities used for the transmission of Energy in interstate commerce and provides Transmission Service under the Tariff.

**Transmission Planning Advisory Subcommittee** – A Subcommittee of the Operating Committee, responsible for, among other things, the review of System Reliability Impact Studies, Annual Transmission Baseline Assessments and Annual Transmission Reliability Assessments.

**Transmission Planning Committee** – The Committee described in Section VI.G., and Attachment II., of the filing letter for the NYISO RTO Compliance Filing with FERC.

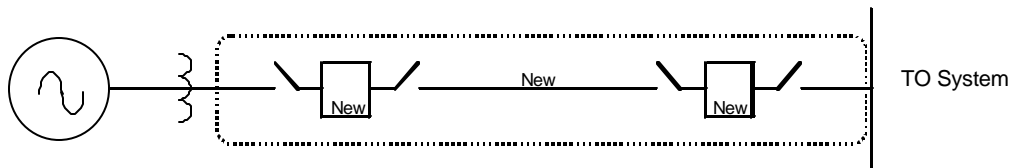
**Transmission System** – (OATT) The facilities operated by the ISO that are used to provide Transmission Services under Part II, Part III or Part IV of this Tariff.

## EXHIBIT 1

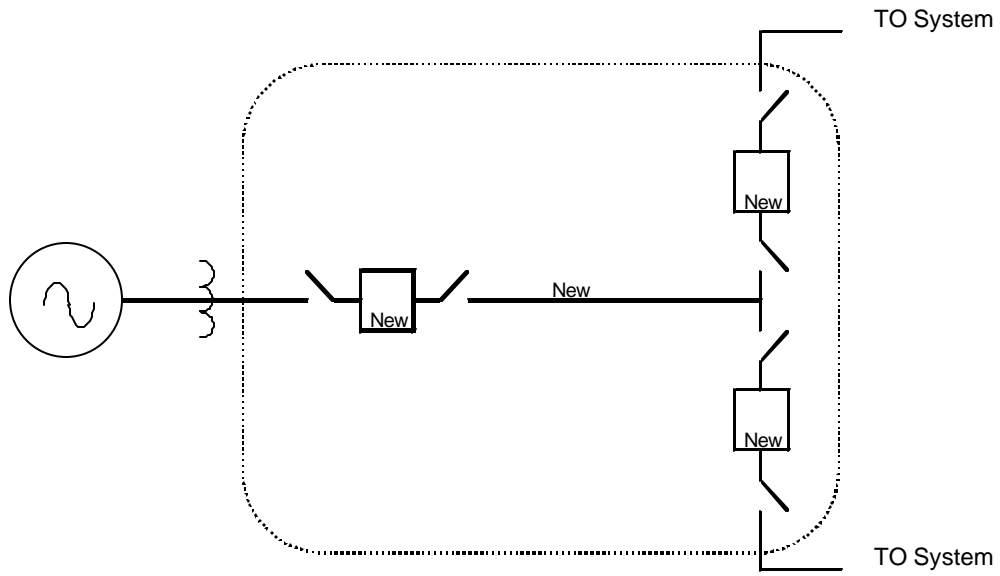
### Illustrative Examples of Attachment Facilities

The interconnection facilities depicted in these diagrams are only illustrative examples of Attachment Facilities. The determination of whether a particular piece of equipment, a particular interconnection facility, is an Attachment Facility or a System Upgrade Facility will depend, in reality, on the facts and circumstances of the particular interconnection project. The classification of each interconnection facility as an Attachment Facility or a System Upgrade Facility will be reflected finally in the Interconnection Agreement between the project Developer and the Connecting Transmission Owner.

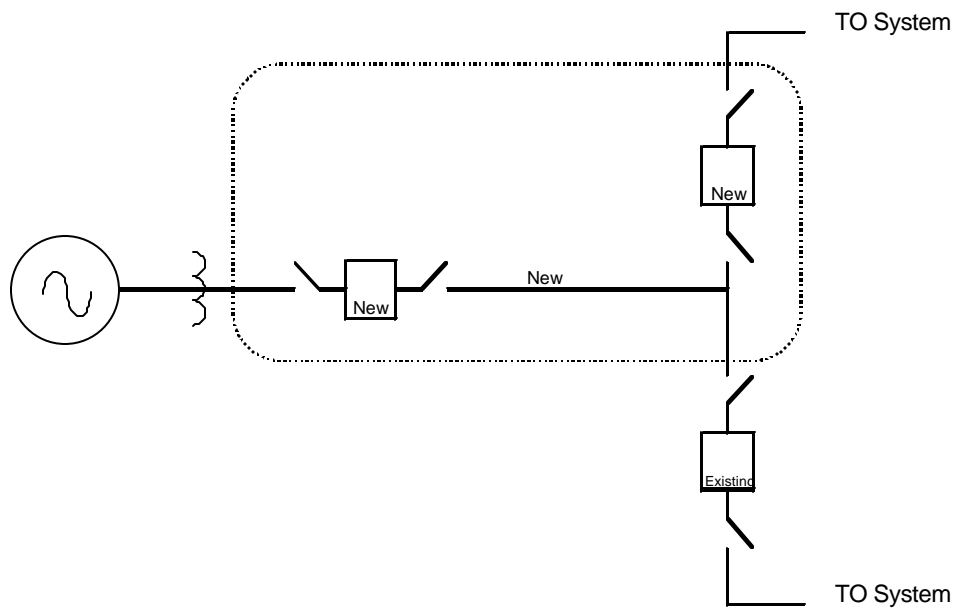
Radial Connection - Example 1

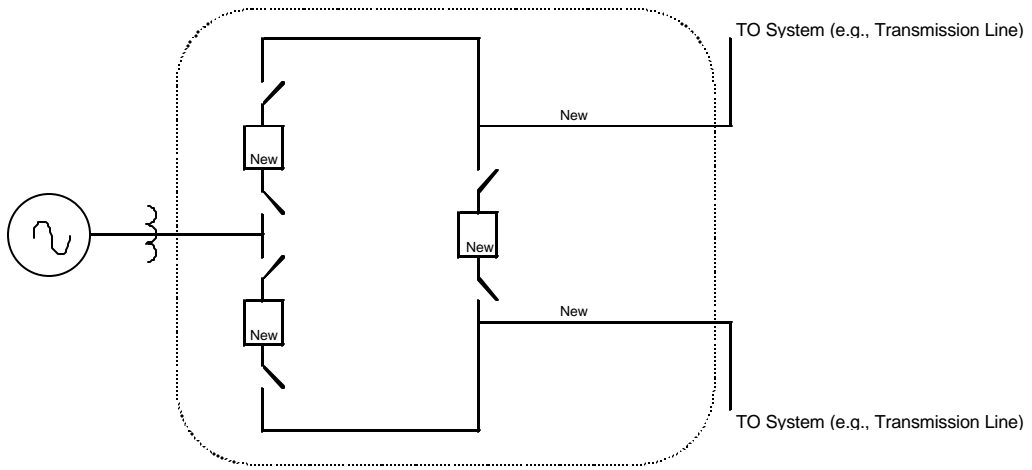


Radial Connection - Example 2



Radial Connection - Example 3





## EXHIBIT 2

### Candidate Projects for the NYISO 2001 Transmission Reliability Assessment

(as of 5/1/2001)

Developer/Project	SRIS Approved	Regulatory Milestone Met (1)
LIPA CT-LI DC Tie-line	Yes	Yes
ANP Ramapo Energy	Yes	Yes
KeySpan Ravenswood	Yes	Yes
NYPA Poletti Project	Yes	Yes
Orion Astoria 2 Restoration	Yes	Yes
ConEd East River Repowering	Yes	Yes
SEI Bowline Point 3	Yes	Yes
Sithe Heritage Station	Yes	Yes
SCS Astoria Energy	Yes	Yes
NYPA 2001 NYC GTs	Yes	Yes

Notes:

1. Regulatory Milestone:
  - Generation subject to Article X - Article X Application deemed complete or approved.
  - Generation not subject to Article X - application for environmental permit filed.
  
  - Transmission subject to Article VII - Article VII Application deemed complete or approved.
  - Transmission not subject to Article VII - application for environmental permit filed.
  
- The NYISO TRA covering the Athens and Bethelam projects was completed in 2000, thus those projects are included in the pre-2001 “baseline” for assessment of the Class 2001 projects.
  
- The NYISO 2001 Transmission Reliability Assessment began on April 1.



- For the 2001 study, projects had until May 1 to meet the qualifications to be included in the study.
- In subsequent years, projects must meet qualifications by March 1 to be included in the study for that year.

### EXHIBIT 3

#### Examples of Material Impact Computations

Replacement of Breaker 100, present rating 50 kA, cost \$1 million

Replacement of Breaker 900, present rating 63 kA, cost \$1.5 million

Replacement of 115 kV line X200 connectors and wavetrapp for the contingent loss of line Z100, cost \$2 million

Project	MW Size	Breaker 100 Short Circuit Contribution Amperes	Breaker 900 Short Circuit Contribution Amperes	Distribution Factor on Line X200 for loss of line Z100 for thermal upgrades
Oak	1000	3000	600	20%
Elm	500	2000	400	15%
Pine	100	300	200	1%
Birch	1000	300	200	3%
Redwood	500	100	100	5%
Balsa	10	5	3	30%

Initial Class Year Cost Allocation amperes

Breaker 100:

$$\text{Cutoff effect } 2\% * 50,000 = 1,000$$

$$\text{Oak } \$1 \text{ million} * 3000 / (2000 + 3000) = \$600,000$$

$$\text{Elm } \$1 \text{ million} * 2000 / (2000 + 3000) = \$400,000$$

Breaker 900

$$\text{Cutoff effect } 2\% * 63,000 = 1,260. \text{ Material Impact exception in effect}$$

$$\text{Oak } \$1.5 \text{ million} * 600 / (600 + 400 + 200 + 200 + 100) = \$600,000$$

$$\text{Elm } \$1.5 \text{ million} * 400 / (600 + 400 + 200 + 200 + 100) = \$400,000$$

$$\text{Pine } \$1.5 \text{ million} * 200 / (600 + 400 + 200 + 200 + 100) = \$200,000$$

$$\text{Birch } \$1.5 \text{ million} * 200 / (600 + 400 + 200 + 200 + 100) = \$200,000$$

$$\text{Redwood } \$1.5 \text{ million} * 100 (600+400+200+200+100) = \$100,000$$

Line X200:

$$\text{Total material MW contributions } (0.2*1000) + (0.15*500) + (0.05*500) + (0.3*10) = 303 \text{ MW}$$

$$\text{Oak } \$2 \text{ million} * 0.2 * 1000/303 = \$1.32 \text{ million}$$

$$\text{Elm } \$2 \text{ million} * 0.15 * 500/303 = \$495,050$$

$$\text{Redwood } \$2 \text{ million} * .05 * 500/303 = \$165,017$$

$$\text{Balsa } \$2 \text{ million} * .3 * 10/303 = \$19,801$$

*Subsequent Class Year*

A 500 MW generator “Tiger” is added that contributes 1000 amperes to breaker 100, 1000 amperes to breaker 900, and a 4% distribution factor on the X200 line for the loss of circuit A1386 (the most critical monitored element/contingency combination for the X200 line with the Tiger generation installed).

Assume the depreciated amount of these System Upgrade Facilities are \$900,000 and \$1.8 million respectively.

Breaker 100:

$$\text{Cutoff effect } 2\% * 50,000 = 1,000$$

$$\text{Oak } \$900,000 * 3000/(2000+3000+1000) = \$450,000$$

$$\text{Elm } \$900,000 * 2000/(2000+3000+1000) = \$300,000$$

$$\text{Tiger } \$900,000 * 1000/(2000+3000+1000) = \$150,000$$

The Tiger cost is reimbursed to Oak and Elm in the proportion to their previous payments:

$$\text{Oak } \$150,000 * (\$600,000/1,000,000) = \$90,000$$

$$\text{Elm } \$150,000 * (\$400,000/\$1,000,000) = \$70,000$$

Breaker 900:

Below the material impact threshold

Line X200:

Below the material impact threshold.

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Doc #: 660415; V. 9

Doc Name: Rules to Allocate Responsibility for the Cost of New Interconnection Facilities

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