CASE 07-E-1507
ERP DELIVERABLE 1:
COST ALLOCATION & RECOVERY
FOR
REGULATED ELECTRIC BULK-SYSTEM RELIABILITY PROJECTS
DPS STAFF STRAW OPTIONS
January 25, 2008

The purpose of this straw proposal is to suggest a framework for the allocation and recovery of costs related to PSC jurisdictional regulated projects that may be required if market-based merchant projects are not sufficient to ensure the reliability of the bulk electric system and the NYISO triggers a regulated backstop solution.

The straw proposal seeks to fulfill two major goals. The first goal is to provide a framework for cost recovery that provides assurances to project sponsors that there will be a defined avenue to recover reasonable expenditures. The second goal is to develop a process that is reasonably parallel to the federal process for cost allocation and cost recovery of regulated transmission project investments so that solution development will not be influenced by forum issues.

COST ALLOCATION

- The NYISO ESPWG has drafted principles and an allocation methodology for application to reliability investments in the FERC tariff. Development of the methodology was pursued with the thought that it could be applied to all resources – transmission, generation and demand-based projects – on an equal basis.

- It is proposed that the PSC use the NYISO-drafted principles and methodology for generation and demand-based projects, which are presented in Appendix A.

- The allocation methodology requires calculations based on the Comprehensive Reliability Plan (CRP) base cases. As such, the calculation of the allocation should be performed by the NYISO for projects where recovery is under PSC jurisdiction.

- The NYISO should file the results of the allocation with the PSC.

COST RECOVERY

- Before the establishment of the NYISO planning process and the state-wide wholesale competitive market regime, utilities had the sole industry responsibility to propose projects to ensure a reliable bulk electric system. Utilities built projects or portions of projects that were within their respective service territories and recovery was usually from the utility's ratepayers. With the advent of the competitive market, the concept of "beneficiaries pay" has been adopted at the NYISO and approved by the FERC. Therefore, in the new context we have the situation where the entity that incurs costs to

implement a reliability solution might need to have payment flow from customers of a different LSE/ utility.

- While the PSC has broad electric rate authority over the investor-owned utilities, there are several entities such as NYPA, LIPA and some municipal utilities that are not under PSC rate jurisdiction. Therefore, any cost recovery methodology that would require payment from these entities (as beneficiaries) must coordinate recovery among entities that are not solely under PSC jurisdiction.

- Reasonably-incurred costs for generation and demand-based projects to be recovered will be for the entire project that the PSC authorizes to proceed.[1] If the project produces capacity beyond the smallest technically feasible solution related to the NYISO-identified reliability need, then the ISO would perform two cost allocations using the same methodology. The first calculation will be based on the project size required to meet the reliability need and the second will be based on the reliability benefits for the incremental size of the project. The results of the first calculation would be subject to recovery per the cost allocation methodology described above. The PSC will determine whether recovery of the incremental portion will be per the same cost allocation methodology or some other determination. The PSC-determined incremental costs would be passed through a PSC-determined recovery mechanism.

- In all cases, incremental TCCs, installed capacity, energy and/or other products resulting from the reliability project will be auctioned into the appropriate NYISO markets and the resulting revenues will offset the project's monthly revenue requirement.

MODEL 1: PSC DIRECTED RECOVERY

- PSC requires all entities that it regulates and are allocated costs to contract with the project sponsor for recovery of costs.

- The investor-owned utility or alternate developer will file generation and demand-based project costs with the PSC for recovery authorization.

- There will be a mechanism established by the PSC to enable recovery from retail ratepayers of investor-owned utility payments through the contracts.

- NYPA and LIPA costs will be recovered through a mechanism they establish with the ISO (e.g., FERC tariff, their own ISO tariff).

- NYPA, LIPA and PSC need to develop an agreement establishing the conditions under which the Authorities will contract with the project sponsor for recovery of the sponsor's costs.

[1] It is anticipated that DPS Staff would monitor construction and provide a recommendation to the PSC as to the reasonableness of the costs. It is the expectation that only if DPS Staff is concerned whether construction costs are reasonable or a party makes a filing questioning the reasonableness of the construction costs would it be likely that the PSC would institute a prudence proceeding.

MODEL 2: NYISO – FERC TARIFF

- All reasonably-incurred regulated reliability project costs would be recovered through the FERC ISO tariff.

- If an investor-owned utility or alternate developer is the sponsor of the regulated generation or demand-based project, then the entity will submit its costs to the PSC before a rate recovery filing is made with FERC.

- If the PSC places a limit on the costs that are recoverable, the entity will not file with FERC for costs in excess of that amount, nor will the NYISO file on the entity's behalf, unless a New York State court were to authorize a higher cost.

- There will be a mechanism established by the PSC to enable recovery from retail ratepayers of investor-owned utility payments through the FERC ISO tariff.

APPENDIX A
NYISO Developed Cost Allocation Principles & Methodology

1.0 Cost Allocation for Regulated Project that Resolve a Reliability Need

1.1 Cost Allocation Principles

Cost allocation for regulated transmission solutions to Reliability Needs shall be determined by the NYISO based upon the principle that beneficiaries should bear the cost responsibility. The specific cost allocation methodology in Section 14.2, developed by the NYISO in consultation with ESPWG, incorporates the following elements:

a. The focus of the cost allocation methodology shall be on solutions to violations of specific Reliability Criteria.

b. Potential impacts unrelated to addressing the Reliability Needs shall not be considered for the purpose of cost allocation for regulated solutions.

c. Primary beneficiaries shall initially be those Transmission Districts identified as contributing to the reliability violation.

d. The cost allocation among primary beneficiaries shall be based upon their relative contribution to the need for the regulated solution.

e. The NYISO will examine the development of specific cost allocation rules based on the nature of the reliability violation (*e.g.*, thermal overload, voltage, stability, resource adequacy and short circuit).

f. Cost allocation among Transmission Districts shall recognize the terms of prior agreements among the Transmission Owners, if applicable.

g. Consideration should be given to the use of a materiality threshold for cost allocation purposes.

h. The methodology shall provide for ease of implementation and administration to minimize debate and delays to the extent possible.

i. Consideration should be given to the "free rider" issue as appropriate. The methodology shall be fair and equitable.

j. The methodology shall provide cost recovery certainty to investors to the extent possible.

k. The methodology shall apply, to the extent possible, to Gap Solutions.

l. Cost allocation is independent of the actual triggered project(s), except when allocating Minimum Locational Capacity Requirement ("LCR") cost responsibilities, and is based on a separate process that results in NYCA meeting its LOLE requirement.

m. There is no implied relationship between the project(s) triggered by the NYISO and the Compensatory MW additions contemplated in the cost allocation process outlined below.

n. The target year is the year in which a need will be met by a backstop solution(s).

o. The trigger year is the year in which the backstop solution must begin to be implemented, driven by the project lead time.

p. Cost allocation for a solution that meets the needs of a target year assumes that backstop solutions of prior years have been implemented.

q. Cost allocation will consider the most recent values for LCRs. LCR must be met for the target year.

1.2 Cost Allocation Methodology

General Reliability Solution Cost Allocation Formula:

The cost allocation mechanism for regulated transmission reliability projects, whether proposed by a Responsible Transmission Owner or a Transmission Owner or Other Developer, would be used as a basis for allocating costs associated with projects that are triggered to meet Reliability Needs identified in the RNA. The formula is not applicable to that portion of a project oversized beyond the smallest technically feasible solution that meets the Reliability Need identified in the RNA. The same cost allocation formula is applied regardless of the project or sets of projects being triggered; however, the nature of the solution set may lead to some terms equaling zero, thereby dropping out of the equation. To ensure that appropriate allocation to the LCR and non-LCR zones occurs, the zonal allocation percentages are developed through a series of steps that first identify responsibility for LCR deficiencies, followed by responsibility for remaining need. This cost allocation process can be applied to any solution or set of solutions that involve a single or multiple cost allocation steps. One formula can be applied to any solution set:

$$\text{Cost Allocation}_i = \left[\frac{\text{LCRdef}_i}{\text{Soln Size}} + \left[\frac{\text{Coincident Peak}_i \times (1 - \text{LCR}_i)}{\sum_{k=1}^{N} \text{Coincident Peak}_k \times (1 - \text{LCR}_k)} \times \frac{\text{Soln STWdef}}{\text{Soln Size}} \right] \right.$$

$$= \quad + \left[\frac{\text{Coincident Peak}_i \times (1 - \text{LCR}_i)}{\sum_{l=1}^{M} \text{Coincident Peak}_l \times (1 - \text{LCR}_l)} \times \frac{\text{SolnVCIdef}}{\text{Soln Size}} \right]$$

$$= \quad + \left[\frac{\text{Coincident Peak}_i}{\sum^{n} \text{Coincident Peak}_k} \times \frac{\text{SolnGNLdef}}{\text{Soln Size}} \right] \times 100\%$$

$k = 1$

Where *i* is for each applicable zone, n represent the total zones in NYCA, m represents the zones isolated by the binding interfaces, and where LCR is defined as the locational capacity requirement in terms of percentage and is equal to zero for those zones without an LCR requirement, (1-LCR) is set equal to zero if the actual value is negative, $LCRdef_i$ is the applicable zonal LCR deficiency, SolnSTWdef is the STWdef for each applicable project, SolnVCIdef is the VCIdef for each applicable project, SolnGNLdef is the GNL def for each applicable project and Soln Size represents the total compensatory MW addressed by each applicable project.

Four step cost allocation methodology for regulated reliability solutions:

a. Step 1 - LCR Deficiency

(i) Any deficiencies in meeting the LCRs for the target year will be referred to as the LCRdef. If the reliability criterion is met once the LCR deficiencies have been addressed, that is LOLE ≤ 0.1 for the target year is achieved, then the only costs allocated will be those related to the LCRdef MW. Cost responsibility for the LCRdef MW will be borne by each deficient locational zone(s), to the extent each is individually deficient.

For a single solution that addresses only an LCR deficiency in the applicable LCR zone, the equation would reduce to:

$$\text{Allocation}_i = \frac{\text{LCRdef}_i}{\text{Soln_ Size}} \times 100\%$$

Where *i* is for each applicable LCR zone, $LCRdef_i$ represents the applicable zonal LCR deficiency, and SolnSize represents the total compensatory MW addressed by the applicable project.

(ii) Prior to the LOLE calculation, voltage constrained interfaces will be recalculated to determine the resulting transfer limits when the LCRdef MW are added.

b. Step 2 - Statewide Resource Deficiency. If the reliability criterion is not met after the LCRdef has been addressed, that is an LOLE > 0.1, then a NYCA Free Flow Test will be conducted to determine if NYCA has sufficient resources to meet an LOLE of 0.1.

(i) If NYCA is found to be resource limited, the NYISO, using the transfer limits and resources determined in Step 1, will determine the optimal distribution of additional resources to achieve a reduction in the NYCA LOLE to 0.1.

(ii) Cost allocation for Compensatory MW added for cost allocation purposes to achieve an LOLE of 0.1, defined as a Statewide MW deficiency (STWdef), will be prorated to all NYCA zones, based on the NYCA

coincident peak load. The allocation to locational zones will take into account their locational requirements.

For a single solution that addresses only a statewide deficiency, the equation would reduce to:

$$\text{Allocation}_i = \left[\frac{\text{Coincident Peak}_i \times \left(1\text{-}LCR_i\right)}{\sum_{k=1}^{n} \text{Coincident Peak}_k \times \left(1\text{-}LCR_k\right)} \times \frac{\text{So1nSTWdef}}{\text{So1n Size}} \right] \times 100\%$$

Where *i* is for each applicable zone, n is for the total zones in NYCA, and LCR is defined as the locational capacity requirement in terms of percentage and is equal to zero for those zones without an LCR requirement, (1-LCR) is set equal to zero if the actual value is negative, Soln STWdef is the STWdef for the applicable project, and SolnSize represents the total compensatory MW addressed by the applicable project.

c. Step 3 - Voltage Constrained Interface Deficiency. If the NYCA is not resource limited as determined by the NYCA Free Flow Test, then the NYISO will examine voltage constrained transmission interfaces, using the Binding Interface Test.

(i) The existing output results of MARS ot.09 files indicate the average expected number of hours that each interface is at limit in each flow direction, as well as the average expected number of hours with a loss of load event. These average expected values will be used as an initial indicator to determine the binding interfaces that are impacting LOLE within the NYCA.

(ii) NYISO will review the ot.09 output along with other applicable information that may be available in MARS to make the determination of the binding interfaces and to determine if there is a need to develop a new MARS output table that would provide a clearer and more transparent determination.

(iii) Zone(s) within areas isolated from the rest of NYCA as a result of voltage constrained interface limits are assigned cost responsibility for the Compensatory MW, defined as VCIdef, needed to reach an LOLE of 0.1.

(iv) If one or more areas are isolated as a result of binding interfaces identified through the Binding Interface Test, the NYISO will determine the optimal distribution of Compensatory MW to achieve a NYCA LOLE of 0.1. Compensatory MW will be added until the required NYCA LOLE is achieved or until the voltage constrained interfaces reach their thermal limits. If the interfaces are at their thermal limits and the required NYCA LOLE has not been achieved, Step 4 of the process will be conducted.

(v) The VCIdef MW are allocated to zones isolated as a result of the voltage constrained interface limits, based on their NYCA coincident peaks. Allocation to locational zones will take into account their locational requirements.

For a single solution that addresses only a binding interface deficiency, the equation would reduce to:

$$\text{Allocation}_i = \left[\frac{\text{Coincident Peak}_i \times \left(1\text{-}LCR_i\right)}{\sum_{l=1}^{m} \text{Coincident Peak}_l \times \left(1\text{-}LCR_l\right)} \times \frac{So \text{ In } VCLdef}{\text{Soln Size}} \right] \times 100\%$$

Where *i* is for each applicable zone, n is for the total zones in NYCA, m is for the zones isolated by the binding interfaces, and where LCR is defined as the locational capacity requirement in terms of percentage and is equal to zero for those zones without an LCR requirement, (1-LCR) is set equal to zero if the actual value is negative, SolnVCIdef is the VCIdef for the applicable project and So1nSize represents the total compensatory MW addressed by the applicable project.

d. Step 4 - General Resource Deficiency. If the reliability criterion is still not met after Step 3, the NYISO will determine the optimal distribution of additional compensatory MW, defined as GNLdef MW, to achieve a NYCA LOLE of 0.1.

(i) The cost for these GNLdef MW will be allocated among all zones in the state, prorated on a NYCA coincident peak load basis.

For a single solution that addresses only a GNL deficiency, the equation would reduce to:

$$\text{Allocation}_i = \left[\frac{\text{Coincident Peak}_i}{\sum_{k=1}^{n} \text{Coincident Peak}_k} \times \frac{So \text{ In } GNLdef}{\text{Soln Size}} \right] \times 100\%$$

Where *i* is for each applicable zone, n represents the total zones in NYCA, and where SolnGNLdef is the GNLdef for the applicable project and Soln Size represents the total compensatory MW addressed by the applicable project.

e. If, after the completion of Steps 1 through 4, there is a thermal or voltage security issue that does not cause an LOLE violation, it will be deemed a local issue and related costs will not be allocated under this process.

f. Costs related to the deliverability of a resource will be addressed under the NYISO's deliverability procedures