

January 12, 2010

**ELECTRONICALLY SUBMITTED**

Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

Re: New York Independent System Operator, Inc.'s Report on Broader Regional Markets;  
Long-Term Solutions to Lake Erie Loop Flow;  
Docket No. ER08-1281-\_\_\_\_.

Dear Secretary Bose:

In accordance with paragraph 6 and ordering paragraph "B" of the Federal Energy Regulatory Commission's ("Commission's") July 16, 2009 *Order Authorizing Public Disclosure of Enforcement Staff Report and Directing the Filing Of an Additional Report* in Docket No. ER08-1281-000 ("July Order"),<sup>1</sup> and in accordance with paragraphs 8 and 9 of the Commission's *Order Granting Clarification* that was issued on September 14, 2009 in Docket No. ER09-1281-003,<sup>2</sup> the New York Independent System Operator, Inc. ("NYISO"), hereby submits this *Report on Broader Regional Markets; Long-Term Solutions to Lake Erie Loop Flow* ("Report"). Ordering paragraph "B" of the July Order instructs the NYISO to "develop and file a report on long-term comprehensive solutions to the loop flow problem, including addressing interface pricing and congestion management, and any associated tariff revisions, within 180 days of the date of this order." Paragraph 9 of the Order Granting Clarification instructs the NYISO to "address, in its 180-day report, *all* solutions to the Lake Erie loop flow problem, including but not limited to: (i) the implementation status of the Ontario-Michigan PARs; (ii) the progress that has been made on the operating agreements for the Ontario-Michigan PARs; and, (iii) the complementary role that physical controls will play in the comprehensive solution to the Lake Erie loop flow problem."

While the NYISO is responsible for submitting this Report to the Commission, it cannot take sole credit for developing (or even drafting) the proposed solutions to Lake Erie loop flow that are described herein. Rather, the contents of this Report, and of the white papers and presentations attached hereto, were developed through collaboration between and among PJM Interconnection, LLC ("PJM Interconnection"), the Midwest Independent Transmission System Operator, Inc. ("Midwest ISO"), the Ontario Independent Electricity System Operator ("IESO") and the NYISO, with input from the stakeholders of the foregoing ISOs and RTOs. The collective recommendation of the ISOs and RTOs is

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<sup>1</sup> *New York Independent System Operator, Inc.*, 128 FERC ¶ 61,049.

<sup>2</sup> *New York Independent System Operator, Inc.*, 128 FERC ¶ 61,239.

to implement a series of market solutions, including: (a) Buy-Through of Congestion, (b) Congestion Management/Market-to-Market Coordination, (c) Interface Pricing Revisions, and (d) Interregional Transaction Coordination. These proposed market solutions are described in Section II of this Report. In addition to the proposed market solutions, IESO and the Midwest ISO are pursuing the implementation of Phase Angle Regulator (“PAR”) devices on the free flowing ties between Ontario and Michigan. The possible operation of the PARs at the Ontario-Michigan border to better align actual power flows to schedules, along with other efforts to coordinate the use of physical controls within the four ISO/RTO region, is addressed in Section III of this Report.

As described in Section VII of this Report, the NYISO is working to implement several aspects of the Broader Regional Market solutions proposed in this Report with ISO New England Inc. (“ISO-NE”). As explained in Section VIII of this Report, Hydro Quebec TransEnergie has volunteered to work with the NYISO to pioneer the NYISO’s initial implementation of the proposed Interregional Transaction Coordination solution, whereby the scheduling of real-time transactions between neighboring markets will occur on a more frequent (quarter hour or five minute) basis.

The NYISO would like to take this opportunity to thank the participating ISOs and RTOs, their Boards of Directors<sup>3</sup> and their stakeholders for complying with both the letter and spirit of the Commission’s encouragement that “all interested parties ... pursue a constructive, workable consensus addressing these matters as expeditiously as possible.”<sup>4</sup> The identification of a comprehensive set of market solutions in this Report would not have been possible if entities like PJM Interconnection, the Midwest ISO and IESO had not each shouldered a significant share of the burden.

The NYISO hopes and expects that the cooperative effort that has permitted the ISOs and RTOs to expeditiously develop the Broader Regional Market solutions that are described in this Report and detailed in the white papers that are attached hereto, will continue until all of the solutions described in this report have been fully implemented. As explained in Section VI of this Report, the ISOs and RTOs expect to begin implementing the first of the proposed market solutions in 2010, but do not expect some solutions to be in place until 2012, or later. The proposed implementation schedule should provide adequate time to address the details of implementing each of the proposed solutions, and also allows further opportunities for stakeholder review of and input regarding the proposed solutions.

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<sup>3</sup> The Boards of Directors of the various ISOs and RTOs have taken an active interest in ensuring the timely development of effective solutions to Lake Erie loop flow.

<sup>4</sup> July Order at P. 6.

## I. Documents Submitted

1. Broader Regional Markets, Long Term Solutions to Loop Flow white paper prepared by Midwest ISO, PJM Interconnection, IESO and NYISO (“Attachment A”)<sup>5</sup>;
2. Broader Regional Markets, Developing Solutions to Lake Erie Loop Flow, presentations prepared by IESO, Midwest ISO, PJM Interconnection and NYISO that were presented to stakeholders of the four ISOs/RTOs at a technical conference held on December 15, 2009 in Carmel, Indiana (“Attachment B”);
3. Broader Regional Markets, Solutions to Loop Flow presentations prepared by IESO, Midwest ISO, PJM Interconnection and NYISO that were presented to stakeholders of the four ISOs/RTOs at a technical conference held on October 29, 2009 in Albany, New York (“Attachment C”);
4. Overview of Proposed Inter-Area Coordination Between ISO New England and New York ISO (“Attachment D”);
5. Letter from Mr. Thomas H. Wrenbeck of ITC Holdings to Mr. Rana Mukerji of the NYISO dated December 23, 2009 (“Attachment E”); and
6. \*Northeast ISO Seams Resolution Report for the third quarter of 2009, issued October 19, 2009 (“Attachment F”).

\*The NYISO has attached the Northeast ISO Seams Resolution Report for the third quarter of 2009 (“Seams Report”) to this Report in order to make clear that the Broader Regional Market solutions proposed in this report are neither expected, nor intended to comprehensively resolve all existing coordination or seams issues between the participating ISOs and RTOs. Opportunities for enhanced coordination that are not addressed by the Broader Regional Markets solutions proposed in this Report are identified in the Seams Report.

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<sup>5</sup> Attachment A is the latest draft of a white paper that describes the proposed Broader Regional Market solutions to Lake Erie loop flow in far greater detail than this Report. Earlier versions of the white paper were distributed for discussion at the October 29, 2009 technical conference in Albany, New York and the December 15, 2009 technical conference in Carmel, Indiana. The attached version addresses/responds to many stakeholder concerns that were raised at the technical conferences. For example, provisions adding payments/credits for the scheduling of transactions that relieve transmission congestion were added to page 27 of the white paper based on stakeholder input.

## **II. Summary of Proposed Broader Regional Market Solutions**

### **A. Introduction**

The ISOs and RTOs have developed four Broader Regional Market solutions. A prerequisite to implementing the Buy-Through Congestion and Congestion Management/Market-to-Market Coordination solutions is the completion of the North American Electric Reliability Corporation's ("NERC's") Parallel Flow Visualization tool (or the development of an alternative thereto), which will significantly improve the ability to accurately perform generation-to-load calculations and will make available common and consistent information regarding the sources of power flows and their impacts.<sup>6</sup> The proposed Buy-Through of Congestion solution is designed to address loop flow by allocating a more complete and accurate measure of the costs caused by external transactions, such as imports, exports and wheels-through, to the cost-causing transactions. The proposed Interface Pricing Revisions address existing seams between markets that tend to exacerbate loop flows. The Congestion Management solution (referred to as "Market-to-Market Coordination") is expected to reduce the cost of addressing transmission congestion within the region, and can be utilized in conjunction with Buy-Through of Congestion to minimize the cost of addressing flowgate constraints. Enhanced Interregional Transaction Coordination will reduce the risk/exposure to congestion costs experienced by entities that schedule inter-Balancing Authority transactions, and is expected to provide other financial benefits to participating markets. Each of the ISOs and RTOs intends to cover its own costs of designing and implementing the Broader Regional Market solutions proposed in this Report.

A long-term solution to Lake Erie circulation can best be achieved by the collective implementation of all of the proposed initiatives. Individually, each initiative only addresses a component of the Lake-Erie loop flow problem, and provides limited benefits in terms of improved market efficiency. Implemented as a group, the proposed solutions are expected to produce far greater benefits. For example, Buy-Through of Congestion addresses the scheduling of external transactions, but does not address the beneficial or detrimental impact that scheduling a particular mix of generation to serve Balancing Authority load may have on a neighboring market. Congestion Management fills this gap by permitting a Balancing Authority to schedule its generation in a manner that will result in the lowest overall regional cost to resolve system constraints. Interregional Transaction Coordination allows for more frequent region-to-region interchange which will improve the efficacy and responsiveness of both the Buy-Through of Congestion and Congestion Management solutions. The combined capabilities of the proposed solutions offer the potential to reduce uplift costs associated with real-time event management and congestion management, to improve the capability to incorporate intermittent resources, and to lower total system operating costs.

A summary explanation of the Parallel Flow Visualization Tool and of each of the four proposed Broader Regional Market solutions is set forth below. A significantly more detailed description of each

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<sup>6</sup> The Parallel Flow Visualization Tool, or a comparable alternative, is needed to provide the NYISO with the information it needs to support implementation of the Market-to-Market Coordination and Buy-Through of Congestion solutions that are described in this Report.

of the items described below is available in Attachment A to this Report. Attachment A is the latest version of a white paper that was prepared by the ISOs and RTOs and distributed to stakeholders for comment and discussion at technical conferences that were held on October 29, 2009 in Albany, New York, and on December 15, 2009 in Carmel, Indiana.

## **B. Parallel Flow Visualization Tool**

Network flows on an interconnected grid are the composite result of all the individual actions taken in the interconnected regions to dispatch generation to meet their load, to direct flow on controllable facilities, and to transfer energy between regions. No single region currently has access to sufficient information to decompose line and flowgate flows into the unique sources of those flows.

The Parallel Flow Visualization Tool will assemble the necessary real-time data to perform the generation-to-load calculations, facilitate the calculation of impacts and make available common and consistent information regarding the sources of power flows and their impacts to all regions. The Parallel Flow Visualization Tool will distinguish the source of flow between (a) each separate region's impacts associated with generation-to-load dispatch and (b) individual transaction impacts.

The NERC Interchange Distribution Calculator ("IDC") Working Group is currently tasked with defining the necessary data reporting requirements and developing with Open Access Technologies, Inc. ("OATI") the specification for performing a generation-to-load calculation, which is referred to as a "market flow" calculation when applied to Balancing Authorities that operate in organized ISO/RTO markets. Accurate and timely data reporting by Balancing Authorities will be required to support the accurate computation of market flows.

The future market flow calculation process will require some entities to provide significantly more data, and on a more frequent basis than is currently supported. The magnitude of the expected benefits will be directly tied to the quality of the data reporting. The ISOs and RTOs support the accurate, complete and timely reporting of the necessary information to achieve the region wide implementation of the parallel flow visualization process and the visibility it provides to market flow impacts. The information that will be provided by the Parallel Flow Visualization Tool is required to support the NYISO's implementations of Congestion Management and Buy-Through of Congestion Broader Regional Market solutions to Lake Erie loop flow, and will augment the information available in the IDC (and available for the NERC Transmission Loading Relief "TLR" procedures) to address impacts from Lake Erie loop flows.

If NERC, or OATI, is unable to (timely) develop the Parallel Flow Visualization Tool, alternative solutions will need to be developed to obtain the information that is necessary to implement the Congestion Management and Buy-Through of Congestion Broader Regional Market solutions. To support the ISOs and RTOs efforts to timely implement the Broader Regional Market solutions, the ISOs and RTOs will evaluate by June 1, 2010 the state of the Parallel Flow Visualization Tool implementation. If the solution is determined to be abandoned, unsupported, or not achievable in 2010, the ISOs and RTOs will pursue alternative solutions to the visibility initiative in an effort to maintain the proposed solutions implementation timelines.

## **C. Buy-Through of Congestion**

### **1. Explanation of Solution**

The current practice for scheduling of interregional transactions only requires scheduling parties to pay for the congestion charges assessed by the Balancing Authorities that are part of the “contract path” over which an external transaction is scheduled. Costs that an external transaction imposes on Balancing Authorities that are not included in the contract path are not currently considered in the scheduling process, nor are they charged to the scheduling entity. Buy-Through of Congestion addresses this shortcoming by more completely assessing the congestion charges associated with scheduling an interregional transaction to the scheduling entity.

The movement of power from Balancing Authority to Balancing Authority is typically scheduled on a particular contract path. In reality, power moves consistent with the laws of physics and the relative impedances of the various elements of the transmission system, and actual power flows can be quite different from the path over which a particular transaction is scheduled to flow.

Managing power that flows in a manner that is not consistent with the contract path over which an external transaction is scheduled to flow can be a costly endeavor, particularly when the associated uncontrolled off-contract path loop flow causes congestion on prime transmission corridors in Balancing Authorities that do not have the transaction scheduled in their markets. The NERC TLR procedures provide a blunt instrument for addressing the off-contract path impacts of scheduled transactions. Invoking the TLR procedures may result in market and operational inefficiencies because TLR requires the curtailment of expected energy deliveries without regard to economic rationing principles. The TLR process does not take into account the scheduling party’s possible economic willingness to pay to maintain its transaction schedules, nor does the TLR process account for or assess the economic benefit of moving power between regions. More efficient utilization of the transmission network can be achieved and more accurate transaction scheduling decisions can be made if the cost of managing off-contract path congestion can be calculated and appropriately allocated to the scheduled power transfers that caused the congestion. The proposed Buy-Through of Congestion Broader Regional Market solution will assign off-contract path power flows comparable congestion cost exposure for equivalent use of the transmission network to contract path power flows.

The Buy-Through of Congestion bidding features will allow the scheduling party to indicate if it is, or is not, willing to pay the congestion charges caused by its transactions off-contract path flow impacts. If a transaction party indicates it is not willing to pay congestion charges its transaction will be removed if the off-contract path flows created by the transaction add to congestion costs in a participating off-contract path ISO or RTO. Once removed, the transaction will not be reinstated until the neighboring ISO/RTO indicates that the congestion on the impacted flowgate has been adequately relieved. Transactions that indicate they are not willing to pay congestion charges in their bid will not incur such charges for the period of time necessary to remove the transactions after congestion is identified.

The objective of the Buy-Through of Congestion Broader Regional Market solution is to (a) identify the sources of loop flow caused by Balancing Authority to Balancing Authority schedules via the NERC IDC Parallel Flow Visualization Tool, (b) determine the costs incurred in supporting the loop flows by each impacted region, as indicated by the actual real-time shadow cost of each constrained flowgate, or the equivalent, and (c) allocate the costs incurred by the off-contract path Balancing Authorities to the scheduling entity, or remove the associated schedules if the scheduling entity is not willing to pay the full cost of flowing its transaction(s). The Buy-Through of Congestion processes will result in a more complete identification of and accurate assignment of the costs to move power between regions, and will provide an economic alternative to the administrative/physical TLR curtailment processes. IESO, Midwest ISO, PJM Interconnection and NYISO all plan to participate in developing and implementing the Buy-Through of Congestion Broader Regional Market solution, subject to obtaining the necessary approvals.

Even after the Buy-Through of Congestion process is implemented, TLR will remain available as a reliability backstop to address circumstances where the proposed Buy-Through of Congestion solution is not able to provide timely, or does not provide sufficient constraint relief to protect system reliability. For example, this could occur when a Balancing Authority's internal re-dispatch cannot achieve the needed relief.

## **2. Expected Benefits**

The Buy-Through of Congestion Broader Regional Market solution will provide more accurate price signals because it requires scheduling entities to pay, and permit off-contract path Balancing Authorities to recover, the congestion cost associated with scheduling an external transaction (import, export or wheel-through). The solution also provides an economic alternative to the market and operational interruptions that occur when the TLR process is invoked. Both of these benefits will result in more efficient utilization of the transmission network.

## **3. Stakeholder Concerns**

In discussions with stakeholders, the Buy-Through of Congestion solution has been the most controversial of the Broader Regional Market solutions proposed by the ISOs and RTOs. However, from the ISO's and RTO's perspective, it is an important solution because it is the solution that will ensure that entities scheduling energy transactions around Lake Erie pay the true cost of achieving their transaction energy schedule, including the congestion/redispach costs incurred by off-contract path markets that are necessary to permit the scheduled transaction to be delivered.

Stakeholder concerns have focused in two areas. First, stakeholders have expressed a desire that they be able to submit, as a component of an external transaction bid, an indication of the total amount of congestion they are willing to pay to off-contract path Balancing Authorities before the transaction must be removed (an "up to" congestion bid). Second, stakeholders have taken the position that purchasing "firm" transmission service over a transaction's contract path should either excuse the firm transaction from paying the costs of congestion caused in off-contract path markets, or should require the removal of all non-firm transactions before firm transactions can be assessed congestion charges for

their impact on off-contract path markets. Both of these concerns are briefly addressed below. However, the ISOs and RTOs expect to take up and thoroughly vet these issues as part of the implementation and stakeholder review processes that are described in Section V.C of this Report.

Several stakeholders have requested that the Buy-Through of Congestion solution include the ability to specify a real-time “up-to” congestion charge limitation, indicating the maximum amount of off-contract path congestion the entity scheduling a transaction would be willing to pay. The ISOs and RTOs recognize that Buy-Through of Congestion will (appropriately) result in cost risk exposure being transferred from each region’s internal loads (which are currently responsible for uncollected congestion charges) to the transacting parties whose schedules produce the off-contract path congestion. The ISOs and RTOs are committed to providing the necessary data transparency and visibility of projected and occurring congestion costs to allow traders to consider their cost exposure when requesting a schedule or alternatively to terminate their schedules upon observations of congestion charge allocations. The ISO’s additionally acknowledge the need to develop the necessary congestion cost hedging products to allow traders to purchase the congestion management product at specified values within the respective day-ahead markets, where applicable. Past experience has not shown the need for an up-to congestion product to be necessary if there is adequate real-time price transparency around price differences. The ISOs and RTOs response to the desire expressed by stakeholders to incorporate up to congestion bids in the Buy-Through of Congestion Broader Regional Market solution is addressed in greater detail on pages 17 – 20 of the white paper that is included as Attachment A to this Report, and in the presentation titled *Management of Congestion Cost Exposure* that is included in Attachment B to this Report.

Stakeholders have also expressed concern that scheduling “firm” transmission service along the contract path will not protect an external transaction schedule if the scheduling entity does not elect to pay for the congestion its transaction may cause in Balancing Authority areas that are not included in the external transaction’s contract path. In fact, it is possible that a firm transaction that is not willing to pay off-contract path congestion could be removed before an otherwise identical non-firm transaction that elects to pay off-contract path congestion *if* both transactions are determined to be causing congestion that requires redispatch by an off-contract path Balancing Authority.

Transactions scheduled using firm transmission service are responsible for their congestion impact along the contract path. The scheduling of transmission service is separate and distinct from the responsibility for paying congestion charges, and is not equivalent to ensuring a congestion cost-free path of transmission access. Transacting parties, regardless of service provisions, must still supply bids and offer and be evaluated and selected in economic merit order.

In some markets the cost of firm service may include a hedging product to protect against potential congestion charges. Hedges against congestion costs can also/alternatively be acquired through the available supplemental Financial Transmission Right or Transmission Congestion Contract auctions. The cost of the available hedging products is, effectively a proxy for the potential congestion cost exposure. Hedging mechanisms are limited in their scope to the market from which they are procured. To the extent that service is necessary across multiple regions, multiple products may need to be acquired.

While the costs of parallel flow impacts have not been historically allocated to external transaction schedules,<sup>7</sup> that outcome was not based upon the expectation that the costs incurred by off-contract path Balancing Authorities were not the responsibility of the scheduling party.<sup>8</sup> Rather, the problem was that it was not technically feasible to accurately assign parallel flow impacts to a particular transaction. Congestion costs could not be applied to off-contract path impacts until the evolution of the individual marketplaces achieved the ability to identify and quantify the costs of these impacts and the collective marketplaces achieved a solution that would allow for the application of these charges to the sources. The Parallel Flow Visualization Tool and Buy-Through of Congestion solution will enable the ISOs and RTOs to accurately identify, assign and apply congestion charges to off-contract path flows, thereby comparably charging external transactions for their contract path and off-contract path congestion impacts. All transmission customers will have the opportunity to indicate their willingness (or unwillingness) to be responsible for these congestion charges. Removing a transaction schedule because the scheduling entity has taken an economic position that is no longer viable is a scheduling decision made by the participant. It is not a violation of the firm transmission service arrangement if the customer decides that it is unwilling to pay for redispatch service in off-contract path markets where its transaction has a congestion impact.

#### **D. Congestion Management/Market-to-Market Coordination**

In paragraph 6 of the July Order, the Commission instructed the NYISO to address Congestion Management in this Report. PJM Interconnection, the Midwest ISO and the NYISO have agreed to work together to implement Congestion Management (called Market-to-Market Coordination) at their borders. The proposed implementation timeline is coincident with the proposed implementation timeline for Buy-Through of Congestion. A summary description of the proposed solution is set forth below. Please see pages 28 to 36 of the white paper that is included as Attachment A to this Report for additional details explaining how Market-to-Market Coordination is expected to operate.

A highly interconnected transmission network provides benefits of improved operational reliability and redundancy. However, a necessary byproduct of synchronously interconnected Balancing Authorities are loop flows resulting from a regions dispatch of its resources to meet its own load requirements. While loop flows can cause or aggravate constraints in a neighboring Balancing Authority, the synchronous interconnection of neighboring markets also presents the opportunity for multiple Balancing Authorities to act to relieve transmission congestion on the interconnected system.

The re-dispatch of generators within a Balancing Authority that is interconnected with the Balancing Authority that is experiencing the congestion may be able to address transmission constraints more cost effectively than the re-dispatch of generators or other control action taken by the congested Balancing Authority. A Congestion Management, or Market-to-Market Coordination, protocol

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<sup>7</sup> To date, the only remedy that has been available to address flowgate impacts from off-contract path flows has been the NERC TLR process.

<sup>8</sup> The *pro forma* tariffs provide that redispatch service will be provided to make firm transmission service available, assuming that the transmission customer is willing to pay for the cost of redispatch.

(1) allows for inter-Balancing Authority dispatch to manage congestion if, and to the extent, an interconnected Balancing Authority can re-dispatch resources to alleviate the congestion at a lower cost than the Balancing Authority that is experiencing the congestion, and (2) permits the appropriate settlement (payment) based on the facts and circumstances of each situation.

In order to effectively implement Market-to-Market Coordination it is necessary to (a) pre-identify a consistent set of constraints that multiple Balancing Authorities can address through re-dispatch actions, (b) develop an agreed to baseline of allowable usage of each others transmission networks,<sup>9</sup> and (c) establish data sharing protocols to communicate real-time constraint management costs between Balancing Authorities. After-the-fact calculation of settlement charges will be performed to provide compensation for the dispatch action when the system flows are less than pre-defined baseline values. Overuse of a neighboring Balancing Authority's transmission system that results in costs to the neighboring Balancing Authority must be redressed. Market-to-Market Coordination will be incorporated directly into a regions dispatch and price setting protocols to maintain the existing consistency between resource schedules and prices. No other explicit charge or refund to a redispatched resource will be necessary.

Expected benefits of implementing the Market-to-Market Coordination solution include:

- Lower congestion costs. The ability to use lower cost resources in an interconnected Balancing Authority to address transmission constraints is expected to reduce the overall cost of managing transmission congestion.
- More consistent pricing across ISO/RTO borders. When Market-to-Market Coordination is in effect, prices at the borders between Balancing Authorities are expected to converge more closely. For example, under Market-to-Market Coordination, a resource located in PJM could be setting the price, or determining the shadow cost of relieving a New York transmission constraint (or *vice-versa*).
- More reliable operation. Because economic generation in another RTO/ISO is now available to address transmission constraints (a broader pool of resources is available), the participating markets should experience fewer emergency transmission operations.

As explained above, Market-to-Market Coordination can achieve a more cost effective utilization of the region's collective assets to address constraints across multiple systems, resulting in lower overall congestion costs to consumers and provides a more consistent price profile across markets. The Market-to-Market Coordination details currently being considered are largely based on the existing Market-to-Market coordination program that is currently in place between the Midwest ISO and PJM Interconnection, a program with which the Commission and stakeholders are already familiar.

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<sup>9</sup> PJM Interconnection and the NYISO have spent significant time discussing how best to determine appropriate rules for determining baseline "entitlements" to use the capacity of a neighboring transmission system. Various alternatives have been considered which require a representative set of historical flowgate impacts to properly evaluate. The ISOs and RTOs are awaiting the completion of the Parallel Flow Visualization tool to assemble the necessary data set of cross-border flowgate impacts to complete their benchmarking analysis. The ISOs and RTOs await the opportunity to work together using the information that the Parallel Flow Visualization Tool will produce.

## **E. Interface Pricing Revisions**

In paragraph 6 of the July Order, the Commission instructed the NYISO to address Interface Pricing in this Report. The Midwest ISO, PJM Interconnection and the NYISO have agreed to implement comparable interface pricing methods at their common borders. IESO is still in the process of determining its intended participation in the measure described below.

Efficient and compatible interface proxy bus prices will improve the interconnected markets' ability to efficiently transfer power within the four ISO/RTO region. Potential improvements to interface pricing methods have been identified both (1) at times when there is no, or limited ability to conform actual power flows around Lake Erie to scheduled power flows, and (2) at times when Phase Angle Regulators ("PARs") and other control devices are able to conform actual power flows to scheduled power flows within reasonable tolerances. In recognition of the overall objective of harmonizing market rules across the region, the NYISO proposes to pursue modifications to its interface pricing method that will apply at times when actual power flows are not consistent with scheduled power flows. Under these circumstances, the NYISO intends to propose adjustments to its external proxy bus pricing to:

- Recognize the incremental distribution of power flows around Lake Erie when evaluating and pricing the marginal impacts of transaction and generation schedules;
- Evaluate the need for, and scheduling rules surrounding, establishing an additional proxy bus location for the Midwest ISO to acknowledge power deliveries from or to the Midwest region; and
- Evaluate the continued applicability of the existing circuitous path prohibitions.<sup>10</sup>

The ISOs and RTOs also recognize the importance of maintaining compatible and efficient interface proxy bus prices when the PARs at the Ontario – Michigan border are ultimately installed and available to mitigate Lake Erie loop flows. These devices are expected to have the ability to adjust actual power deliveries to be more consistent with scheduled power deliveries. Existing interface proxy bus pricing methods may not set accurate prices under all operating scenarios and may require (a) additional pricing points to be created, or (b) the interface price weighting associated with current points to be adjusted, or (c) adjustments to incremental distribution of power flows to acknowledge power flows that are substantially consistent with the contract path of a transaction.

All of the participating ISOs/RTOs interface proxy pricing methods will need to be able to account for the ability of PARs to manage Lake Erie loop flows.

- At times when actual power flows are consistent with scheduled power flows, the pricing method used will treat power as flowing consistent with the contract path.

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<sup>10</sup> The NYISO does not plan to seek permission from its stakeholders to remove the circuitous path scheduling prohibition from its Tariffs until actual experience with the physical and market solutions described in this Report show that the prohibition is no longer necessary or appropriate. When the proposed physical and market solutions prove their efficacy in practice, the NYISO will discuss removing the existing eight-path circuitous scheduling prohibition with its stakeholders.

- At times when actual power flows do not conform to scheduled power flows (at times when there is loop flow), the interface proxy pricing methods will need to reflect the path over which power is actually flowing, which will not be entirely consistent with the contract path.

In implementing the methods described above, the ISOs and RTOs will also need to evaluate their ability to predict when the PARs will/will not be able to conform power flows to schedules around Lake Erie, and to incorporate the necessary assumptions into each ISO/RTO's respective day-ahead and hour-ahead markets.

#### **F. Enhanced Interregional Transaction Coordination**

Today, PJM Interconnection and the Midwest ISO provide the ability for market participants to schedule an energy transaction on a fifteen minute basis on external interfaces. Enhanced Interregional Transaction Coordination will permit the scheduling of inter-Balancing Authority transactions involving the NYISO on a more frequent basis than the current hourly schedules. Flexible transaction scheduling provisions improve market and operational efficiency by allowing resources schedules to adjust to the dynamic changes in system conditions, as well as unexpected changes to projected conditions. Desired additional flexibility must be balanced with the operational benefits associated with defined firm energy delivery schedules.

Flexible transaction scheduling requires advancements to the existing processes for the development of transaction schedules and the protocols for validation of those schedules. The existing process lacks the coordination and automation necessary to support a scheduling frequency sufficient to address dynamic system conditions. Transaction schedules must be co-developed, rather than independently evaluated, to ensure both regions arrive at the same outcome and the same expectations for energy delivery or receipt.

Enhanced Interregional Transaction Coordination is expected to lower total system operating costs through improved consistency of transaction schedules with market-to-market prices, to expand the pool of flexible assets that are available to balance intermittent power resources, to improve price consistency and transmission utilization and to address existing uncertainties in forward looking scheduling horizons. As explained above, it will also serve to limit the risk an entity will face when it agrees to pay for the congestion its external transaction causes in off-contract path Balancing Authorities because it will be possible to withdraw an accepted transaction should a dramatic intra-hour price change occur in an off-contract path market.

As indicated in Section VI of this Report, the NYISO anticipates implementing the Enhanced Interregional Transaction Coordination Broader Regional Market solution with PJM Interconnection on the Neptune and Linden VFT Scheduled Lines, followed closely by the broader NYISO/PJM Interconnection interface, in 2011.

### **III. Implementation and Effective Operation of Phase Angle Regulators to Control Loop Flows**

Paragraph 9 of the Order Granting Clarification instructs the NYISO to “address, in its 180-day report, *all* solutions to the Lake Erie loop flow problem, including but not limited to: (i) the implementation status of the Ontario-Michigan PARs; (ii) the progress that has been made on the operating agreements for the Ontario-Michigan PARs; and, (iii) the complementary role that physical controls will play in the comprehensive solution to the Lake Erie loop flow problem.” This Report addresses each of the issues identified in the Commission’s Order below. The Report also addresses the ISOs and RTOs plan to perform a study that is ultimately expected to result in the drafting and implementation of regional PAR operating guidelines.

#### **A. Implementation Status of the Ontario-Michigan PARs**

There is protective relay work being completed in Ontario that is necessary for the effective operation of the Ontario-Michigan PARs. This work is expected to be completed by the end of the first quarter of 2010. At that time it is expected that all of the Ontario-Michigan PARs will be available to provide service. *See* Attachment E.

#### **B. Operating Agreement for the Ontario-Michigan PARs**

The NYISO has been informed by a representative of International Transmission Company d/b/a *ITC Transmission* (“ITC”) that, although the various necessary operating agreements for the Ontario-Michigan PARs are in “final form,” ITC will not execute them and “the Department of Energy will, accordingly, not be in a position to approve the pending amendment to ITC’s Presidential Permit which is required to place the PARs into service” until consumers in the other markets surrounding Lake Erie agree to pay for a portion of the claimed \$8 million annual cost ITC charges its consumers for constructing, operating and maintaining its PARs at the Ontario-Michigan border. *See* Attachment E.

#### **C. Complimentary Role of Physical Controls in Developing Comprehensive Solution to Lake Erie Loop Flow**

##### **1. Price Setting**

As explained in Section II.E of this Report, at times when the coordinated operation of the PARs around Lake Erie is able to conform actual power flows to scheduled power flows within mutually agreed upon tolerances, the interface pricing method used by the ISOs and RTOs will treat power as flowing consistent with the contract path. At times when the actual power flows do not conform to scheduled power flows (at times when there is loop flow), the ISOs and RTOs interface proxy pricing methods will need to reflect the path over which power is actually flowing.

## **2. Anticipated Interaction with TLR Process**

At times when the coordinated operation of the PARs around Lake Erie is able to conform actual power flows to scheduled power flows within mutually agreed upon tolerances, the NERC IDC tool will recognize the delivery of transactions into and out of Ontario on contract path and will not identify external transactions as the source of parallel flows. At times when the actual power flows do not conform to scheduled power flows (at times when there is loop flow), the NERC IDC tools will identify external transaction as having parallel path impacts on flowgates based upon the current physical network configuration.<sup>11</sup>

## **3. Regional Study and Development of Regional PAR Operating Guide**

The operation of the PARs by the four markets around Lake Erie can influence the amount of circulation flows. PARs can be used to alter power flows to follow a different electrical path or to better follow the contract path, consistent with the planned operation of the Ontario-Michigan PARs. While PARs are capable of substantially mitigating/controlling loop flows, they are not capable of eliminating Lake Erie loop flows entirely. Coordinated operation of the PARs in the four markets around Lake Erie can enhance the degree to which circulation flows are managed and avert instances where regional PARs could work at cross-purposes. To this end, a regional study will be initiated during 2010 to identify PARs and other controllable devices that are capable of influencing Lake Erie loop flows and to study the potential reliability and market impacts of better coordinated operation. This study will also identify significant regional paths or flowgates impacted by Lake Erie loop flows.

Upon completion of the analysis and necessary updates to the existing Commission-accepted PAR operating protocols, regional operating guide recommendations will be developed and implemented by the ISOs and RTOs to better manage Lake Erie loop flow through the coordinated operation of the identified significant controllable devices. This effort will include implementing the necessary communications infrastructure and regional business processes to facilitate regional coordination of the identified controllable devices.

### **D. Cost Allocation**

In a letter that is included as Attachment E to this Report, ITC, a member of the Midwest ISO, states its desire to recover an unspecified portion of its estimated \$8 million annual cost of owning, operating and maintaining its Ontario-Michigan PARs from consumers across the broader region. In its letter ITC states that, although its Ontario-Michigan PARs will be ready to enter service by the end of the first quarter of 2010, and although agreements for the operation of the PARs are in “final form,” ITC will not execute the agreements that are necessary to permit its Ontario-Michigan PARs to enter service until “substantially more progress is made on the cost sharing issue.” In written comments that ITC

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<sup>11</sup> Because transactions that are scheduled across the IESO/Midwest ISO interface will not be identified for curtailment pursuant to the TLR process for off-contract path flowgate impacts at times when the Ontario-Michigan PARs are treated as “controlling” it is vitally important to ensure that the calculation of Lake Erie loop flows that is used for TLR purposes is consistent with and accurately reflect actual system conditions.

submitted to the ISOs and RTOs following the October 29, 2009 technical conference, ITC invited other entities that own/operate PARs and other controllable devices that can be used to mitigate Lake Erie circulation to participate in a plan whereby the cost of these devices would be recovered from the broader region and offered to host a meeting to discuss its proposal.<sup>12</sup>

The NYISO declines ITC's invitation to schedule discussions to determine whether consumers in other markets are willing to pay for a portion of the cost of ITC's Ontario-Michigan PARs. Based on the discussions the NYISO has held with its stakeholders to date, there is no reason for the NYISO to meet with ITC to discuss an agreement to pay for a portion of ITC's costs of owning, operating and maintaining its Ontario-Michigan PARs.<sup>13</sup> The opposition of the NYISO and its stakeholders to ITC's proposal to reallocate the cost of existing transmission facilities that were not developed pursuant to a Commission approved regional planning effort is consistent with the Commission's decisions regarding the allocation of transmission costs within the Midwest ISO and PJM Interconnection.<sup>14</sup>

#### **IV. Tariff Revisions Needed to Support Implementation of Proposed Broader Regional Market Solutions to Lake Erie Loop Flow**

Stakeholder and regulatory approvals of the tariff revisions described below will be necessary to implement the proposed Broader Regional Market solutions to Lake Erie loop flow.

##### **A. Parallel Flow Visualization Tool**

Possible concerns related to data sharing before the Parallel Flow Visualization Tool is actually being used to direct coordinated regional operation exist. Clarification by the Commission that "Transmission System Information"<sup>15</sup> includes within its scope information that must be shared in order

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<sup>12</sup> See *Comments of International Transmission Company d/b/a ITC Transmission on Draft Loop Flow Report*. Available at: [http://www.midwestiso.org/publish/Folder/4dfde8\\_124a04ca493\\_-7c8e0a48324a](http://www.midwestiso.org/publish/Folder/4dfde8_124a04ca493_-7c8e0a48324a)

<sup>13</sup> Given the circumstances that led to the development of the Ontario-Michigan PARs, all of the New York stakeholders that have expressed a position to the NYISO have indicated that they do not support the regional allocation of the cost of ITC's Ontario-Michigan PARs. This group includes, but is not limited to, the New York Transmission Owners, the Long Island Power Authority and the New York Power Authority.

<sup>14</sup> See *American Electric Power Service Corporation v. Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C., et al.* 122 FERC ¶ 61,083 at PP. 95 - 102 (2008).

<sup>15</sup> Transmission System Information, or "TSI" is defined in Section 4.0 of the NYISO's Code of Conduct, which is set forth in Attachment F to the NYISO's Open Access Transmission Tariff.

TSI is information: (1) that is commercially valuable and (2) access to which is necessary to buy, sell or schedule Energy, Capacity, Ancillary Services or Transmission Service. Examples of TSI include, but are not limited to, the following:

- Available Transfer Capability;
- Total Transfer Capability;
- Information regarding physical Curtailments and Interruptions;
- Information regarding Ancillary Services;
- Pricing for Transmission Service; and

to design new systems that will be used to buy, sell or schedule energy and transmission service, could speed the Parallel Flow Visualization Tool development process.

#### **B. Regional PAR Coordination**

Modifications to existing Commission-accepted PAR operating agreements may be necessary. Depending upon the nature of the regional PAR operating guideline that is ultimately produced, Commission acceptance of this guideline may also be necessary.

#### **C. Interface Pricing Revisions**

The NYISO may have to make changes to its Market Administration and Control Area Services Tariff (“Services Tariff”) and/or Attachment B to its Services Tariff and Attachment J to its Open Access Transmission Tariff (“OATT”) to explain how and when each of the proposed methods of determining prices at external proxy buses will apply. If the NYISO determines that it needs to develop a separate proxy bus to represent the Midwest ISO (a Balancing Authority that does not border the NYISO), then new rules will likely have to be added to address how this proxy bus will operate and how prices will be determined.

If the ISOs and RTOs determine that it would be appropriate to remove the eight path circuitous scheduling prohibition, changes to Attachment B to the NYISO’s Services Tariff and Attachment J to the NYISO’s OATT will be necessary to remove the prohibition.

#### **D. Buy-Through of Congestion**

Implementation of the Buy-Through of Congestion Broader Regional Market solution will require significant new Tariff revisions to implement. Necessary revisions will likely include:

- Revisions to the Joint Operating Agreements between the four ISOs/RTOs.
- New settlement rules for calculating off-contract path congestion costs/credits and passing them to the market where a particular transaction is being settled for payment/recovery.
- New settlement rules to permit the ISOs and RTOs to charge for, or pay credits to, market participants that scheduled transactions that affected congestion in, but that were not scheduled through, one of the four ISO/RTO Balancing Authorities.
- New bid parameters to permit entities scheduling external transactions to specify their willingness to pay for off-contract path congestion.

- Rules to permit ISOs and RTOs to take willingness to pay congestion in neighboring markets into account when choosing which external transactions to schedule.
- New hedging products to help market participants manage exposure to off-contract path congestion costs. These could include the ability to schedule virtual transactions at external proxy buses and other virtual products that are designed to help manage congestion exposure within a specific ISO/RTO Balancing Authority. Complimentary additions to the market monitoring/market mitigation rules will likely be necessary to permit adequate policing of the expansion of virtual trading authority.
- Enhanced credit rules that account for the cost exposure presented by a possible obligation to pay congestion costs caused by an external transaction in a neighboring off-contract path market.

#### **E. Congestion Management/Market-to-Market Coordination**

Implementation of Market-to-Market Coordination with PJM Interconnection, the Midwest ISO and ISO-NE will likely require the following changes:

- Revisions to the NYISO's Joint Operating Agreements with PJM Interconnection and ISO-NE.
- Creation of a NYISO Joint Operating Agreement with the Midwest ISO.
- New settlement provisions to authorize the NYISO to pay an interconnected Balancing Authority for relief provided, and to allocate payments that the NYISO receives from participating Balancing Authorities.
- Development of rules for determining "entitlements" to use the capacity of a neighboring transmission system.

#### **F. Enhanced Interregional Transaction Coordination**

Implementing Enhanced Interregional Transaction Coordination will require the NYISO to make changes to its Services Tariff and/or Attachment B to its Services Tariff and Attachment J to its OATT to explain how Real-Time Commitment and Real-Time Dispatch will schedule import and export transactions, and to explain the pricing rules that will apply to external transactions that are scheduled in fifteen minute or five-minute increments.

#### **G. Mitigation Measures**

Once the design details of each of the Broader Regional Market solutions, including any associated hedging measures, have been determined, the NYISO and the other ISOs and RTOs will need to review their market monitoring and market mitigation measures to make sure the market monitoring

and market mitigation rules adequately address the new capabilities that will be made available to market participants.

## **V. Stakeholder Participation**

### **A. Technical Conferences**

More than 100 stakeholder representatives participated (in person, or by phone) in the technical conference on Broader Regional Market solutions to Lake Erie loop flow that was held in Albany, New York on October 29, 2009. More than 90 stakeholder representatives participated (in person, or by phone) in the technical conference on Broader Regional Market solutions to Lake Erie loop flow that was held in Carmel, Indiana on December 15, 2009. The primary purpose of the technical conference that was held in Albany was to “roll out” the first draft of a detailed white paper describing the proposed Broader Regional Market solutions to stakeholders and to obtain their input on the ISOs and RTOs proposal. The ISOs and RTOs solicited written feedback from stakeholders at the first technical conference. Eleven parties responded to this request and provided comments on various components of the recommended solutions. Copies of the written stakeholder comments are available on the Midwest ISO’s web site at:

[http://www.midwestiso.org/publish/Folder/4dfde8\\_124a04ca493\\_-7c8e0a48324a](http://www.midwestiso.org/publish/Folder/4dfde8_124a04ca493_-7c8e0a48324a)

The presentations at the December 15, 2009 technical conference in Carmel, Indiana focused on addressing concerns raised by stakeholders at the Albany technical conference and/or in the written comments to the ISOs and RTOs.

### **B. NYISO Committee Discussions**

The NYISO has given more than a dozen presentations on various aspects of the proposed Broader Regional Market solutions to its stakeholders in 2009 and in early 2010. The purpose of these presentations has been to ensure that New York stakeholders are adequately apprised of the status of the ongoing discussions between the ISOs and RTOs, and to solicit their input on the proposed long-term solutions to Lake Erie loop flow.

### **C. Going Forward Process**

The implementation schedule proposed by the ISOs and RTOs in Section VI of this Report is intended to allow sufficient time to work through the details of implementing the five proposed Broader Regional Market solutions to Lake Erie loop flow, and to address valid concerns identified by stakeholders. The anticipated stakeholder process will include the preparation of a cost/benefit analysis of each of the proposed solutions by the ISOs and RTOs for discussion with their stakeholders, provincial authorities and appropriate regulatory agencies.

## VI. Proposed Implementation Schedule

This Report presents a collective set of solutions that all of the ISOs and RTOs support. The following schedule is proposed for implementing the Broader Regional Market solutions. It assumes the timely availability of a Parallel Flow Visualization Tool; preferably, the tool that is being designed by the NERC IDC and OATI but, in the alternative, a tool designed and implemented by the ISOs and RTOs. The proposed schedule is intended to provide sufficient time for the ISOs and RTOs to address the numerous details that still need to be addressed before the proposed solutions can be implemented, including confirming the cost-effectiveness of each proposed solution and obtaining the necessary stakeholder and provincial or regulatory approvals. The proposed schedule is also intended to provide sufficient time and opportunity for stakeholder input prior to the implementation of each of the proposed solutions. It is the expectation of the ISOs and RTOs that all of the measures proposed below will be pursued in concert. The below schedule is a slightly modified version of the schedule that was presented to stakeholders at the December 15, 2009 technical conference. *See Attachment B to this Report, slide number 70.*

### Potential/Proposed\* Implementation Timeline

• Interface Pricing Revisions	
– NYISO Revisions - Design	2Q – 2010
• Regional PAR Coordination Operating Guide	
– Initiate Regional Study	2Q – 2010
• Parallel Flow Visualization	
– Software Ready	2Q – 2010
– Parallel Operations	4Q – 2010
• Buy-Through of Congestion	
– Design Development	4Q – 2010
– Implementation	3Q – 2011
• Congestion Management/Market-to-Market Coordination	
– PJM-NYISO-MISO Implementation	3Q – 2011
– Extend to Additional Regions	2012
• Interregional Transaction Coordination	
– Energy Scheduling between NYISO and PJM	4Q – 2011
– Extend to Additional Regions	2012

\*Prospective timeline pending design development and approval from Market Participants, neighboring Balancing Authorities and the Commission.

## **VII. Implementation of Broader Regional Market Solutions by NYISO and ISO-New England**

In addition to the Broader Regional Market solutions to Lake Erie loop flow that will be implemented by PJM Interconnection, the Midwest ISO, IESO and the NYISO, ISO-NE and the NYISO have agreed to work together to implement the Market-to-Market Coordination and Enhanced Interregional Transaction Coordination Broader Regional Market solutions. Due to the nature of the interconnection between New York and the New England region, the development of the Buy-Through of Congestion market solution does not appear to be necessary at this time. The NYISO and ISO-NE Boards of Directors have been significant participants in the effort to better coordinate the two neighboring markets.

The implementation of the proposed measures between the NYISO and ISO-NE is expected to better synergize these two Balancing Authorities' market rules. The Broader Regional Market improvements that the NYISO and ISO-NE have agreed to work to implement are described in greater detail in Attachment D to this Report.

## **VIII. Implementation of Broader Regional Market Solutions by NYISO and Hydro Quebec TransEnergie**

In addition to the Broader Regional Market solutions to Lake Erie loop flow that the NYISO will implement with PJM Interconnection, the Midwest ISO and IESO, and the Broader Regional Market solutions that ISO-NE and the NYISO will work to implement, Hydro Quebec TransEnergie and the NYISO have agreed to implement the Enhanced Interregional Transaction Coordination Broader Regional Market solution at the Chateauguay D/C interconnection between the two Balancing Authorities. As the first implementation of Enhanced Interregional Transaction Coordination for the NYISO, the implementation with Hydro Quebec TransEnergie will pave the way for future Enhanced Interregional Transaction Coordination implementations between the NYISO and its other neighbors. Due to the nature of the interconnection between NYISO and Hydro Quebec TransEnergie, the development of the Buy-Through of Congestion and/or Market-to-Market Coordination market solutions do not appear to be necessary at this time.

The NYISO anticipates implementing the Enhanced Interregional Transaction Coordination Broader Regional Market solution, as described in Section II.F of this Report, at the Chateauguay D/C intertie with the Hydro Quebec TransEnergie control area in early 2011.

## **IX. Communications**

Communications and correspondence regarding this Report should be directed to:

Rana Mukerji, Vice President of Market Structures  
Robert E. Fernandez, General Counsel  
\*Robert Pike, Director of Market Design  
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## **X. Service**

The NYISO will electronically send a copy of or link to this Report to every party included on the Secretary's official service list in Docket Nos. ER08-1281-000 and ER09-198-000, to the official representative of each of its Customers, to each participant on its stakeholder committees, to the New York Public Service Commission, and to the electric utility regulatory agencies of New Jersey and Pennsylvania. In addition, the complete filing will be posted on the NYISO's website at [www.nyiso.com](http://www.nyiso.com). The NYISO will also make a paper copy available to any interested party that requests one. To the extent necessary, the NYISO requests waiver of the requirements of the Commission's Regulations to permit it to provide service in this manner.

## **XI. Biennial Reporting**

The NYISO proposes to submit biennial updates to this Report to the Commission addressing the ISOs and RTOs ongoing efforts to implement the Broader Regional Market Solutions to Lake Erie loop flow. The NYISO's proposed biennial updates will address the status of the implementation of the Ontario-Michigan PARs and other issues related to implementing physical controls to mitigate Lake Erie loop flow.

## **XII. Conclusion**

The NYISO respectfully requests that the Commission accept this Report as satisfying the requirements set forth in the Commission's July 16 Order and Order Granting Clarification and accept the proposed biennial reporting requirement that is proposed in Section XI of this Report.

Respectfully submitted,

/s/ Alex M. Schnell

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January 12, 2010

## CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service lists compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. § 385.2010.

Dated at Rensselaer, New York this 12<sup>th</sup> day of January, 2010.

*/s/ Alex M. Schnell* \_\_\_\_\_

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## **Attachment A**

### **Broader Regional Markets, Long-Term Solutions to Lake Erie Loop Flow White Paper**

[Due to the size of the files associated with some of the Attachments, each Attachment is being individually submitted to the Commission.]

## **Attachment B**

### **Broader Regional Markets, Long-Term Solutions to Lake Erie Loop Flow Slide Presentation from the December 15, 2009 Technical Conference Held in Carmel, Indiana**

[Due to the size of the files associated with some of the Attachments, each Attachment is being individually submitted to the Commission.]

## **Attachment C**

### **Broader Regional Markets, Long-Term Solutions to Lake Erie Loop Flow Slide Presentation from the October 29, 2009 Technical Conference Held in Albany, New York**

[Due to the size of the files associated with some of the Attachments, each Attachment is being individually submitted to the Commission.]

## **Attachment D**

### **Overview of Proposed Inter-Area Coordination Between ISO New England and New York ISO**

[Due to the size of the files associated with some of the Attachments, each Attachment is being individually submitted to the Commission.]

## **Attachment E**

### **Letter from ITC Holdings to NYISO Dated December 23, 2009**

[Due to the size of the files associated with some of the Attachments, each Attachment is being individually submitted to the Commission.]

## **Attachment F**

### **Northeast ISO Seams Resolution Report for the Third Quarter of 2009, Issued October 19, 2009**

[Due to the size of the files associated with some of the Attachments, each Attachment is being individually submitted to the Commission.]