UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Midwest Independent Transmission System Operator, Inc. and International Transmission Company d/b/a ITC*Transmission*	**Docket No. ER11-1844-002**

INITIAL POST-HEARING BRIEF OF NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

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October 16, 2012

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INITIAL POST-HEARING BRIEF OF NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.

To: Honorable Steven L. Sterner
Presiding Administrative Law Judge

The New York Independent System Operator, Inc. ("NYISO") hereby submits its initial brief. The brief is organized in the manner specified in the Joint Statement of Issues filed in this proceeding.

STATEMENT OF THE CASE[1]

1. Introduction

The Joint Application presents an unprecedented, unsupported and unsupportable attempt by a transmission owner (ITC*Transmission* or "ITC") and its regional transmission organization (the Midwest Independent Transmission System Operator, Inc. or "MISO") to charge New York and PJM customers millions of dollars each year for phase angle regulators ("PARs") built in Michigan by the transmission owner.

The newly constructed facilities (the "Replacement PARs") replace a PAR that was constructed in 2002 by ITC's predecessor in interest, Detroit Edison (the "Original PAR"). The Original PAR became an ITC asset, then failed and burned up in March 2003. Detroit Edison or ITC had never asked or proposed that NYISO or PJM share in the cost of the Original PAR. Within MISO, the costs of the Original PAR would have been allocated solely to Detroit

[1] Proposed findings of fact and conclusions of law are provided in the Appendix to this initial brief.

Edison's local transmission customers, but were never collected due to the failure of that asset. When the Replacement PARs were approved within MISO's regional planning process, their costs were again allocated solely to the ITC zone within MISO, on the basis that the PARs were simply a replacement of existing facilities. By contrast, the costs of baseline reliability projects approved in the MISO regional planning process are spread across all zones.[2]

Despite the narrow allocation of costs of the Replacement PARs *within* MISO, MISO and ITC now propose in the Joint Application to spread these costs *outside* MISO, to PJM and NYISO. NYISO is not directly interconnected with MISO. Neither NYISO nor PJM consented to these charges, and NYISO and PJM did not participate in the planning of, or the decision to build or design, the Replacement PARs (or the Original PAR). NYISO and PJM had no opportunity to consider alternatives to the ITC facilities. NYISO and PJM were not parties to the 1998 and 2007 agreements pursuant to which Detroit Edison and ITC committed to Canadian utilities to build the Original PAR and the Replacement PARs, respectively, at their own expense.[3]

The Joint Application presents, as observed during the hearings, a charge in "search of a customer."[4] The Presiding Judge should call off that search, and reject the Joint Application in its entirety, for the numerous reasons summarized below.

2. The Joint Application violates the Federal Power Act

As a threshold legal matter, the Federal Power Act requires a public utility to have a contractual or customer relationship with an entity in order to impose charges on that entity,[5] but

[2] Tr. 305:9-306:9.

[3] Initial brief at § III.B.1.

[4] Tr. 121:19.

[5] Initial brief at § I.A.

neither MISO nor ITC has a customer or contractual relationship with the NYISO or its customers.[6]

3. The Joint Application does not satisfy the requirements of the Commission's regulations

The Joint Application is also deficient under the Commission's regulations, as it fails to include required support for the rate of return and the depreciation rate.[7] The Commission's regulations call for rejection of filings that do not meet stated requirements.[8]

4. The Joint Application contravenes Commission precedent

The Joint Application squarely contravenes applicable Commission precedent. A series of Commission orders, including those relating to transmission facilities in PJM and MISO, have prohibited broad reallocation of the sunk costs of existing transmission facilities. The costs of the Original PAR were to be allocated solely to Detroit Edison transmission customers. These are the original "existing facilities" to which the prohibition of subsequent cost reallocation applies.

When the Replacement PARs were approved in 2006, they were specifically denominated in the MISO planning process and, in correspondence, by ITC itself as replacements for existing facilities. In the MISO's planning process the costs of the Replacement PARs were allocated solely to the ITC zone within MISO, consistent with Commission precedent prohibiting the broad reallocation of costs of existing facilities. ITC agreed in the 2007 Facilities Agreement with Hydro One to build the Replacement PARs at ITC's own expense. ITC had essentially completed the construction of its Replacement PARs by 2009. The cossts ITC had incurred were "sunk costs" of "existing facilities" for purposes of the

[6] *Id.* at § III.A.

[7] *Id.* at § I.D.

[8] 18 C.F.R. § 35.5 (2012).

Commission's governing cost allocation precedent. Only after the construction of the Replacement PARs was essentially complete did ITC (with MISO's complicity) seek a broader allocation of those costs, culminating in the filing of the Joint Application.

The pertinent Commission orders reflect that reallocation of transmission facility costs (to spread them beyond the customers of the utility actually building the facility) is not acceptable for existing facilities, and that broad allocation is acceptable only where the facilities were prospectively planned in an open process that included the customers or stakeholders to whom the costs are proposed to be allocated.[9] The costs of the Replacement PARs are sunk costs of existing facilities that were planned without any request for input from PJM or NYISO. At this late hour, MISO and ITC now seek to reallocate the cost of the replacement PARs beyond the ITC customer base to which those costs have been allocated since 2006.[10] This attempt to reallocate the cost of previously planned and constructed facilities violates Commission precedent, and should be rejected outright.

5. The Joint Application's proposed cost allocation also contravenes the policies reflected in Order No. 1000

Order No. 1000's Cost Allocation Principle 4 (which the Commission had proposed before the Joint Application was filed) carries forward the principles that underlie the Commission's precedent described above, by requiring the costs of an facility to be constructed within a region to be allocated solely within that region unless another external entity or region voluntarily agrees to assume a portion of the costs.[11] The Joint Application violates the principle, because it proposes to allocate a portion of the costs of facilities located within MISO

[9] *Id.* at § IV.A.

[10] *Id.*

[11] *Id.* at § IV.B.

(the Replacement PARs) to NYISO and PJM, neither of which has voluntarily agreed to assume a portion of the PARs' costs.

6. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory

If the Joint Application is not rejected on threshold legal and policy grounds, it should be rejected because the facts show that the charges proposed in the Joint Application are unjust and unreasonable, and unduly discriminatory to the NYISO, including for the following reasons explained further below:

- The Joint Application provides no studies or other quantification of "benefits" they assert NYISO and PJM will receive from the Replacement PARs.
- The Replacement PARs (and the Original PAR) were built for the benefit of Detroit Edison and ITC customers.
- The provisions under which MISO and the Independent Electricity System Operator of Ontario ("IESO") will operate the Ontario and Michigan PARs, including the Replacement PARs (collectively, the "MI/ON PARs"), as well as the proposed MISO tariff provisions, permit MISO and IESO to favor their own customers and interests over NYISO's and PJM's customers and interests.
- The Joint Application discriminates against NYISO and PJM customers by failing to propose allocation of charges to IESO customers, and by charging NYISO and PJM customers while MISO customers located outside the ITC transmission zone are not being charged.
- Control by the MI/ON PARs of counterclockwise Lake Erie loop flow does *not* benefit, and may harm, NYISO and its customers. Lake Erie loop flow has been counterclockwise on average for 2012 so far, and MISO's DFAX cost allocation analysis suggests projectedMISO's DFAX cost allocation analysis suggests that Lake Erie loop flow will continue to occur in a counterclockwise direction into the mid-term future.
- The Joint Applicants submitted no studies or analyses to support their repeated claim that the MI/ON PARs will control 600 MW of Lake Erie loop flow, and actual MI/ON PAR performance data for the period since the Replacement PARs were placed in service reveal that the claim is vastly overstated.
- The outage history of the MI/ON PARs indicates a significant risk that the control of Lake Erie loop flow will be provided only intermittently.

- Unlike the rest of the MISO tariff that charges rates for defined services, the tariff provisions filed with the Joint Application propose charges to NYISO and PJM for unspecified services (essentially, for "nothing") and the collection of a rate for nothing is unduly discriminatory to those entities and their customers.

- Besides seeking to charge NYISO and PJM customers for an undefined service, the MISO tariff provisions fail to establish any sort of performance standard or any service obligation of MISO or ITC to the customers that will receive the non-service.

- Data supplied by MISO indicates that MISO and IESO are failing to set the MI/ON PARs-related "flag" in the Interchange Distribution Calculator properly, precluding NYISO and PJM and other regions from using transmission loading relief ("TLR") to call for curtailment of transactions to protect reliability at times when the MI/ON PARs are not successfully mitigating Lake Erie loop flow.

- The Joint Applicants submitted no evidence of any *actual* contribution of NYISO to Lake Erie loop flow, and instead submitted a fundamentally flawed DFAX analysis that uses hypothetical data to estimate NYISO's expected future contribution to Lake Erie loop flow.

- The rebuttal testimony of the Joint Applicants moves away from a "benefits" theory of cost allocation to a cost causation theory, but the Joint Applicants have not submitted studies showing that Lake Erie loop flow causes reliability issues. The only specific reliability issues identified in the record as a reason for construction of the replacement PARs are those reliability concerns identified in MTEP06. All of the MTEP06 reliability concerns occur on ITC's system.

- The Joint Applicants have not shown that loop flow caused any of the ITC system reliability issues identified in the MTEP06 report.

- MISO and IESO have indicated a potential lack of commitment to operate the MI/ON PARs in the manner called for in the Operating Instruction and in representations to the U.S. Department of Energy ("DOE").

These issues are discussed below.

a. The Joint Application provides no studies or other quantification of "benefits" they assert NYISO and PJM will receive from the Replacement PARs.

The unjust and unreasonable nature of the proposed charges is revealed, most fundamentally, by the Joint Applicants' failure to provide studies, analyses and other evidence that support their assertion that NYISO and PJM should pay for the costs of the Replacement

PARs because they and their customers "benefit" from operation of the MI/ON PARs.[12] For example, the Joint Applicants have not introduced any studies quantifying economic benefits or identifying specific reliability benefits to NYISO or PJM from the operation of the MI/ON PARS. On the other hand, the record shows that the Replacement PARs make a broad array of transactional and reliability benefits available to ITC and its customers.[13]

Instead of submitting evidence to support their contentions, the Joint Applicants make generalized assertions of benefit to NYISO and PJM, while admitting they performed no studies to demonstrate or quantify the benefits.[14]

b. The Replacement PARs (and the Original PAR) were built for the benefit of Detroit Edison and ITC customers.

The pertinent contractual, testimonial, and regulatory materials confirm that Detroit Edison and ITC elected, and bound themselves by contract, to construct and pay for, the Replacement PARs in order to better serve the transactional, economic and reliability needs of the utilities and their customers.[15] These needs included greater import capability into the Detroit Edison/ITC system to facilitate trading between Detroit Edison/ITC and Ontario, and between Detroit Edison/ITC and the South, and the need to reduce interruption in Ontario-Michigan trading from curtailments across the electrical interface between Michigan and Ontario (the "MI/ON Interface"). Expected reliability benefits to the ITC service territory were identified in the MISO's MTEP06 report.

[12] *Id.* at § V.B.

[13] *Id.* at § V.D.

[14] *Id.* at § V.B.

[15] *Id.* at § III.B.

c. The provisions under which MISO and IESO will operate the MI/ON PARs, including the Replacement PARs, and the proposed MISO tariff provisions, permit MISO and IESO to favor their own customers and interests over NYISO and PJM customers and interests.

The Operating Instruction under which MISO and IESO are operating the MI/ON PARs (and to which NYISO and PJM are not parties) is unduly discriminatory as it permits MISO and IESO to favor their own customers and interests over NYISO's and PJM's customers and interests.[16] First, neither NYISO nor PJM has a direct say in how MISO and IESO will operate the MI/ON PARs. Second, several provisions of the Operating Instruction require, or at least permit, MISO and IESO to operate the MI/ON PARs in a manner that favors themselves in MISO or IESO emergencies when they are acting to prevent a possible emergency, but does not provide for similar assistance in the event NYISO or PJM are seeking to prevent an emergency. Third, the Operating Instruction also permits MISO and IESO to suspend normal operation of the MI/ON PARs to protect MISO and/or IESO customers in the event of unexpected operational or market outcomes in their regions, but does not provide corresponding protection for NYISO or PJM customers in the event of unexpected operational or market outcomes in the NYISO or PJM regions.

In a similar vein, proposed Attachment SS-1 to the MISO tariff allows MISO to temporarily suspend normal operations of the MI/ON PARs in the event of anomalous MISO market results related to the MI/ON PARs. As confirmed by MISO witness Zwergel, Attachment SS-1 does not provide for similar potential suspension of the MI/ON PARs for anomalous market results in the NYISO or PJM markets.

[16] *Id.* at §§ III.C, IV.E.

d. The Joint Application discriminates against NYISO and PJM customers by failing to propose allocation of charges to IESO customers, and by charging NYISO and PJM customer while MISO customer located outside the ITC transmission zone are not being charged.

Joint Applicants argue that it would be unjust and unreasonable to require one set of market participants to pay for costs that are caused by other market participants. However, the Joint Applicants proposed cost allocation method patently violates the principles that the Joint Applicants espouse. MISO's DFAX analysis indicates that the IESO region's generation-to-load flows are the single largest contributing factor to Lake Erie loop flows, and that IESO's generation-to-load contribution causes more than half (55%) of all Lake Erie loop flow. Nonetheless, MISO and ITC are not proposing to require IESO or its customers to bear any of the costs that the MISO's DFAX analysis indicates that the IESO region causes. To the contrary, MISO and ITC propose to required NYISO's and PJM's customers (as well as ITC customers) to pay for costs that are caused by IESO. The Joint Applicants' attempted justification cannot withstand scrutiny. It would be unduly discriminatory to shift costs "caused" by IESO (under the Joint Applicants' DFAX study and theory) and its customers to NYISO and PJM.[17]

The Joint Applicants also violate their espoused cost allocation principles by proposing not to assign any share of the cost of Replacement PARs to MISO customers outside the ITC zone, despite the fact that MISO's DFAX study indicates that MISO areas and customers located outside ITC's region contribute to Lake Erie loop flows.[18] This proposal is also unduly discriminatory to NYISO and PJM.

[17] *Id.* at § IV.C.

[18] *Id.* at § IV.D.

e. Control by the MI/ON PARs of counterclockwise Lake Erie loop flow does *not* benefit, and may harm, NYISO and its customers. Lake Erie loop flow has been counterclockwise on average for 2012 so far, and MISO's DFAX cost allocation analysis suggests that Lake Erie loop flow will continue to occur in a counterclockwise direction into the mid-term future.

It is unjust and unreasonable to assign costs of the Replacement PARs to New York when it may be harmed, not benefited, by the operation of the MI/ON PARs.[19] New York can be harmed by the operation of the MI/ON PARs when (x) the MI/ON PARs are operated to reduce counterclockwise loop flows, and (y) components of the New York State Transmission System that are substantially affected by unscheduled Lake Erie power flows are constrained, or would become constrained in the absence of counter-clockwise Lake Erie loop flow. As the data MISO provided in Exhibit NYI-66 indicates, Lake Erie loop flow has predominantly flowed in a counter-clockwise direction in 2012. Counterclockwise Lake Erie loop flow tends to relieve transmission congestion in New York. Exhibit NYI-66 shows that, in 2012, the MI/ON PARs have operated to block counterclockwise Lake Erie loop flow. In addition, MISO's DFAX analysis projects that generator-to-load contributions to Lake Erie loop flows will continue to tend to be counterclockwise into the mid-term future.

f. The Joint Applicants submitted no studies or analyses to support their repeated claim that the MI/ON PARs will control 600 MW of Lake Erie loop flow, and actual MI/ON PAR performance data for the period since the Replacement PARs were placed in service reveal that the claim is vastly overstated.

The Joint Application and the MISO and ITC supporting testimonies repeatedly state that the MI/ON PARs are expected to fully mitigate Lake Erie loop flows approximately 74% of the time, and reduce them by approximately 600 MW the remainder of the time.[20] However, the Joint Applicants have not submitted any evidence supporting that claim, and actual MI/ON PAR

[19] *Id.* at § V.C.

[20] *Id.* at § IX.A.

operating data provided by MISO shows that the MI/ON PARs have not effectively conformed actual power flows to scheduled power flows. In fact, the data shows that the operation of the MI/ON PARs frequently increased Lake Erie loop flow. Beyond this, the Operating Instruction does not require MISO and IESO to take additional PAR actions to reduce Lake Erie loop flow when it falls within the +/- 200 MW "control band." It is clearly unjust and unreasonable to charge NYISO and PJM for control that does not meet claimed capabilities.

g. The outage history of the MI/ON PARs indicates a significant risk that the control of Lake Erie loop flow will be provided only intermittently.

Since the Replacement PARs were placed into service, several outages of the MI/ON PARs have occurred.[21] Most notably, at least one PAR was out of service on 71 of the first 104 days the MI/ON PARs were in operation. Of particular concern is the viability of the L4D PAR on the Hydro One system, which has gone out of service repeatedly due to gassing, which in the worst case, can cause an explosion. When fewer than all four of the circuits that comprise the MI/ON Interface as PAR controlled, very little Lake Erie loop flow can be achieved. Thus, the frequent recent MI/ON PAR outages suggest that only intermittent control of loop flow can be expected. This highlights, again, the unjust and unreasonable nature of charging NYISO and PJM for a "non-service" that is not tied to the availability of the MI/ON PARs.

h. Unlike the rest of the MISO tariff that charges rates for defined services, the tariff provisions filed with the Joint Application propose charges to NYISO and PJM for unspecified services (essentially, for "nothing") and the collection of a rate for nothing is unduly discriminatory to those entities and their customers.

At the hearing, ITC witness Grover admitted that MISO's proposed Schedule 36 and Attachment SS contain no description of the service that the NYISO's customers will receive in

[21] *Id.* at § IX.B.

return for their payments.[22] It is unduly discriminatory to NYISO and its customers to be charged a rate for unspecified service (essentially, for "nothing"), when MISO's own customers only pay for services that are specified in MISO's tariffs.

i. Besides seeking to charge NYISO and PJM customers for an undefined service, the MISO tariff provisions fail to establish any sort of performance standard or any service obligation of MISO or ITC to the customers that will receive the non-service.

It is unjust and unreasonable enough to propose a charge for an undefined service, but even more unjust and unreasonable to impose a charge when there is no service obligation or performance standard to determine if the service is being provided adequately. Yet this is precisely what the Joint Applicants propose to do in this proceeding.[23]

j. Data supplied by MISO indicates that MISO and IESO are failing to set the MI/ON PARs-related "flag" in the Interchange Distribution Calculator properly, precluding NYISO and PJM and other regions from using TLRs to call for curtailment of transactions to protect reliability at times when the MI/ON PARs are not successfully mitigating Lake Erie loop flow.

The data supplied by MISO (in Exhibit NYI-66) shows that IESO and MISO frequently fail to set the MI/ON PARs-related "flag" in the NERC Interchange Distribution Calculator ("IDC") properly.[24] In particular, in some hours the flag is being set to "regulate" when the MI/ON PARs are not controlling loop flow within the +/- 200 MW control band, in violation of the Operating Instruction. When the flag is set to "regulate," this blocks the ability of NYISO and PJM (and other control areas) to use TLRs to call for curtailment of transactions in order to protect reliability. It is unjust and unreasonable for NYISO and PJM to be charged for costs of the Replacement PARs when MISO's and IESO's failure to adequately implement their

[22] *Id.* at § VIII.

[23] *Id.*

[24] *Id.* at § IX.C.

operating responsibilities can contribute to an inability to address reliability problems arising in New York or in PJM.

k. The Joint Applicants submitted no evidence of any *actual* contribution of NYISO to Lake Erie loop flow, and instead submitted a fundamentally flawed DFAX analysis that uses hypothetical data to estimate NYISO's expected future contribution to Lake Erie loop flow.

The Joint Applicants provided no evidence of the NYISO's actual contribution to Lake Erie loop flow,[25] even though this is the centerpiece of the Joint Applicants' cost allocation theory. Instead, they offer only a DFAX study showing the hypothetical 2015 contributions PJM, IESO, NYISO and MISO might make to Lake Erie loop flow.

The MISO's study is flawed in every material respect,[26] and was developed in a result-oriented fashion that merits rejection for that reason alone.[27]

First, MISO's reliance on three representative load blocks to represent an entire year was a gross over-simplification that produced inaccurate weighted participation percentages penalizing the NYISO. The MISO should have conducted 8,760 DFAX runs for each region, one DFAX run for every hour of the year, instead of using the three representative load blocks to represent the entire year.[28] Mr. Chatterjee admitted that performing 8,760 DFAX runs would be the most accurate way to time normalize the DFAX analysis over an entire year.[29]

Second, MISO inappropriately relied on an aggregate load duration curve for MISO, NYISO and PJM. [30] The MISO should have used each region's individual load duration curve to perform the DFAX analysis over all 8,760 hours of the year to calculate each region's individual

[25] *Id.* at § VI.A.

[26] *Id.* at § VII.A.

[27] *Id.* at § VII.B.

[28] *Id.* at § VII.A.1.

[29] *Id.* at § VII.A.1 *citing* Tr. 400:15-21.

[30] *Id.* at § VII.A.2.

participation over the MI/ON Interface. According to Mr. Chatterjee, the MISO is not opposed to using individual region's load duration curves for the DFAX analysis.

Third, MISO's unilateral decision to permit directional contributions to the flow participation over the four circuits that comprise the MI/ON Interface to offset each other is inappropriate and inconsistent with other decisions that MISO made with regard to netting of contributions in the DFAX study.[31] Netting participation across the four circuits reduced MISO's flow participation significantly more than any other region. As a result, netting participation appears to be one way that MISO tailored the DFAX analysis to produce results favorable to its own interests.

Fourth, the MISO DFAX study is not reflective of real-world electric power system operation practices. MISO does not account for any economic impacts of generation dispatch in its hypothetical DFAX analysis.[32] On cross-examination Mr. Chatterjee acknowledged that, in contrast to the DFAX analysis, RTOs do not "serve their load by uniformly ramping up all of the generation in their control area."[33] All RTOs dispatch generation throughout their entire system to achieve a least cost economic solution.

Fifth, it was not appropriate to base the DFAX analysis on the contribution to flows on all four of the circuits that comprise the MI/ON Interface.[34] MISO should have calculated the generation-to-load flow participation over only the B3N circuit, on which the Replacement PARs are located. The Replacement PARs on the B3N circuit are the only facilities that are being cost allocated in this proceeding.

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[31] *Id.* at § VII.A.3.

[32] *Id.* at § VII.A.4.

[33] *Id.* at § VII.A.4 *citing* Tr. 440:5-8.

[34] *Id.* at § VII.A.5.

Sixth, MISO failed to consider in its DFAX analysis the cumulative Lake Erie loop flow contribution from regions other than MISO, NYISO, PJM and IESO.[35] The multitude of small "contributors" illustrates that if regions are permitted to assess charges to each other on the basis of asserted "benefits" in the absence of regional agreements, this "chain reaction" and ensuing litigation will have no logical stopping place.

l. The rebuttal testimony of the Joint Applicants moves away from a "benefits" theory of cost allocation to a cost causation theory, but the Joint Applicants have not submitted studies showing that Lake Erie loop flow causes reliability issues. The only specific reliability issues identified in the record as a reason for the construction of the replacement PARs are reliability concerns identified in MTEP06. All of the MTEP06 reliability concerns occur on ITC's system.

Despite the Joint Application's "benefits" premise and the Joint Application's multitude of generically stated, unproven assertions of benefits provided by the Replacement PARs to NYISO and PJM, the rebuttal testimony of a chief MISO witness states that benefits offered by the Replacement PARs are irrelevant, because they should be cost allocated as a reliability project that is allocated based on cost causation.[36] It is unclear why the Joint Applicants have shifted course, unless the weakness of the benefits assertions has become clearer in the period since filing.

It would not be appropriate to allocate costs of the Replacement PARs to the NYISO or its customers based on cost causation principles.[37] If the standard is to be "cost causation," NYISO should not be paying for costs that MISO's analysis shows they didn't cause (e.g., costs caused by IESO and its customers). More fundamentally, under the cost causation theory, ITC's incurrence of the costs of the Replacement PARs was "caused" by ITC's unilateral decision to

[35] *Id.* at § VII.A.7.

[36] *Id.* at § V.A.

[37] *Id.* at § V.F.

assume a contractual obligation to install the Replacement PARs in ITC's 2007 Facilities Agreement with Hydro One, in order to address the transactional and reliability needs of the ITC system and customers. Accordingly, there is no basis for charging NYISO and its customers.

m. The Joint Applicants have not shown that loop flow caused any of the ITC system reliability issues identified in the MTEP06 report.

To the extent the Joint Applicants argue that these needs were created by Lake Erie loop flow, they have submitted no evidence showing that problems caused by Lake Erie loop flow required ITC to restore the B3N circuit and construct the Replacement PARs. In particular, MISO and ITC have each admitted that they never performed an assessment or identified specific reliability criteria that are potentially violated by Lake Erie loop flow, and neither MISO nor ITC submitted studies showing that Lake Erie loop flow causes reliability issues.

The only reliability issues noted in MISO's 2006 regional plan ("MTEP06") as being resolved by the Replacement PARs were those occurring on ITC's own system, and MTEP06 attributes none of these issues to Lake Erie loop flow.[38] These reliability issues, along with the desire to capture transactional benefits for ITC customers, and not the activities of the NYISO or its customers, caused the costs to be incurred to build the Replacement PARs.

n. MISO and IESO have indicated a potential lack of commitment to operate the MI/ON PARs in the manner called for in the Operating Instruction and in representations to the DOE.

A September 9, 2011 e-mail from ITC to MISO provided as Exhibit No. NYT-35 indicates a potential lack of commitment by MISO and ITC (and perhaps IESO) to operating the MI/ON PARs to achieve the +/-200mw bandwidth called for in the Operating Instruction and that ITC, MISO and IESO presented to the DOE in the Presidential Permit proceeding. The e-mail expresses great concern about the apparent volatility of the loop flow shown in August 2011

[38] *Id.* at § V.D.2.

data, and states that ITC and MISO must absolutely ensure they have the flexibility to change the +/- 200 MW control band if it becomes onerous on MISO, ITC and IESO. This uncertainty is yet another reason why it would be unjust and unreasonable to allocate Replacement PARs costs to NYISO and PJM.[39]

7. Conclusion

For the reasons summarized above, the Presiding Judge should reject the Joint Application in its entirety.

THRESHOLD ISSUES

I. WHETHER THE FEDERAL POWER ACT ("FPA") AND APPLICABLE COMMISSION POLICIES THEREUNDER PERMIT THE MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR, INC. ("MISO") AND THE INTERNATIONAL TRANSMISSION COMPANY D/B/A ITC*TRANSMISSION* ("ITC") TO MAKE, AND THE COMMISSION TO APPROVE, THE OCTOBER 20, 2010 FILING (AS AMENDED ON JANUARY 31, 2012)?

A. Section 205 Filings Must Be Premised on a Customer or Other Contractual Relationship with the Entities to Which the Rate Will Be Charged

Judicial and Commission precedent dictate that a Section 205 rate filing requires a customer or other contractual relationship between the filing utility and the ratepayer. As explained in Section III.A below, the NYISO and its customers (in their status as NYISO customers) are in no sense customers of Midwest ISO or ITC, and neither NYISO nor any of its customers (except to the extent particular NYISO customers may also participate in the MISO's markets) is a party to a contractual agreement by which it has consented to pay costs allocated to it by the Midwest ISO. Accordingly, the October 20, 2010 filing of MISO and ITC (the "Joint Applicants") in this proceeding (the "Joint Application") should be rejected.

[39] *Id.* at § IX.E.

The NYISO presented its arguments regarding these matters to the Commission in the rehearing request it submitted addressing the Commission order setting the filing for hearing and accepting it subject to refund.[40] The Commission has not, to date, ruled on this rehearing request. In its Order No. 1000-A, the Commission rejected arguments that "the costs of new transmission facilities can only be allocated within a preexisting contractual relationship,"[41] reasoning that "[r]ather than contractual relationships, the benefits received by users of the regional transmission grid provide a basis for how costs should be allocated."[42] The NYISO is seeking review of this holding in the U.S. Court of Appeals for the District of Columbia Circuit.[43] As explained in its rehearing request of Order No. 1000, NYISO believes that the Commission erred in this holding, because Order No. 1000's extremely broad claims of the Commission's statutory authority exceed the Commission's jurisdiction under the Federal Power Act, and diverge from Commission precedent without a reasoned explanation.[44] Rather than restate its content here, the NYISO Rehearing Request is incorporated herein by reference, and summarized briefly below.

As explained by the U.S. Supreme Court in *In re Permian Basin Area Rate Cases* ("*Permian Basin*"), the requirement for a contractual relationship as the basis for a proposal to charge an entity pursuant to tariff follows from the principle that "[t]he regulatory system created

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[40] *See Midwest Independent Transmission System Operator, Inc. and International Transmission Company d/b/a ITCTransmission*, Request of New York Independent System Operator, Inc. for Expedited Reconsideration or Rehearing, Request to Stay Proceedings and Motion to Shorten Response Period, Docket No. ER11-1844-001 at 5-12 (January 21, 2011) (*hereinafter* "NYISO Rehearing Request").

[41] *See Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000-A, 139 FERC ¶ 61,132 at P 564 (2012) (hereinafter "Order No. 1000-A").

[42] *See* Order No. 1000-A at P 565 (2012).

[43] *See New York Independent System Operator, Inc. v. Federal Energy Regulatory Commission*, Case No. 12-1293 (Consolidated with Case Nos. 12-1232, 12-1233, 12-1250, 12-1276, 12-1279, 12-1280, 12-1285, 12-1290, 12-1292, 12-1294, 12-1296, 12-1299, 12-1300 and 12-1304) (2012).

[44] *See Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Rehearing Request of New York Independent System Operator, Inc., Docket No. RM10-23-001 (August 22, 2011).

by the Act is premised on contractual agreements voluntarily devised by the regulated companies…."[45] If an entity does not take jurisdictional service as a customer from a utility under a contractual relationship, or if there is no other voluntary contractual agreement (such as an RTO agreement) by which charges can be assessed to an entity by a utility, application of the *Permian Basin* principle means that the Federal Power Act's "regulatory system" provides no authority for a utility to file for collection of a rate from the unrelated entity, and no authority under which the Commission may accept such a filing.

Consistent with *Permian Basin,* Commission precedent has long recognized that its rate-related authority under the Federal Power Act requires the existence of contractual relationships between a utility and its customers, and the Commission has rejected rate filings that contravene this basic principle. Perhaps the most recent order reflecting this principle was issued in May 2010,[46] when the Commission reversed a finding of an initial ALJ decision that the MISO could collect Seams Elimination Charge/Cost Adjustment/Assignment ("SECA") transmission-related charges from a retail load-serving entity (Green Mountain) that was not a MISO transmission customer or market participant, even though Green Mountain benefitted from the transmission service that MISO provided to Green Mountain's affiliate, BP Energy, which acted as an intermediary for Green Mountain.

On rehearing, the Commission stood by its earlier rulings that the mere fact that Green Mountain made retail sales cannot justify imposing SECA charges and that Green Mountain's

[45] *In re Permian Basin Area Rate Cases*, 390 U.S. 747, 822 (1968). *Permian Basin* addressed rate filings under the Natural Gas Act. However, "the provisions of the Federal Power Act relevant to [rate-revisions] are in all material respects substantially identical to the equivalent provisions of the Natural Gas Act." *FPC v. Sierra Pac. Power Co.*, 350 U.S. 348, 353, 76 S. Ct. 368, 371-372, 100 L. Ed. 388, 394 (1956); *see also Permian Basin Area Rate Cases* (Continental Oil Co. v. FPC), 390 U.S. at 821, 88 S. Ct. at 1388, 20 L. Ed. 2d at 366; *Richmond Power & Light v. FPC*, 156 U.S. App. D.C. 315, 317, 481 F.2d 490, 492, *cert. denied*, 414 U.S. 1068, 94 S. Ct. 578, 38 L. Ed. 2d 473 (1973); *Cleveland v. Federal Power Comm'n*, 525 F.2d 845, 855 (D.C. Cir. 1976).

[46] *See Midwest Independent Transmission System Operator, Inc.*, Order on Initial Decision, 131 FERC ¶ 61,173 (2010) ("*Green Mountain*"); *on reh'g*, 136 FERC ¶ 61,244 (2011) ("*Green Mountain Rehearing"*).

use of MISO transmission service to serve its retail load did not convert Green Mountain into a MISO customer on whose behalf MISO was authorized to file unexecuted transmission service agreements. The Order on Rehearing noted that "if the existence of retail sales were an appropriate basis to assess SECA charges, then they should be assessed to *all entities selling at retail* and not merely Green Mountain,"[47] and stated that, in the Order on Initial Decision, "the Commission disagreed with the Initial Decision's finding that, even though Green Mountain did not directly contract with Midwest ISO, Green Mountain was ultimately responsible for transmission charges, since the procurement of network transmission service was *for the benefit* of Green Mountain and was its financial responsibility."[48]

The Green Mountain Order and Order on Rehearing are instructive and, if followed, should determine the outcome of this proceeding. In the proceeding at bar, the Joint Applicants submitted proposed revisions to the MISO's tariffs that permit the MISO to charge a portion of the cost of ITC's Replacement PARs to entities with which MISO has no existing contractual or customer relationship. One of the bases for proposing the charges is an assertion that customers of NYISO and PJM Interconnection, L.L.C. ("PJM") will "benefit" from the operation of the MI/ON PARs to control Lake Erie loop flow.[49]

Applied to this case, the Green Mountain orders dictate that the charges for the Replacement PARs remain with ITC's existing transmission service customers, rather than being spread to all entities that MISO and ITC allege will receive a sufficient (but unquantified) benefit from the operation of the MI/ON PARs.

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[47] *Green Mountain Rehearing*, at P 208 (emphasis added).

[48] *Id.* at P 204 (emphasis added).

[49] *See, e.g., Midwest Independent Transmission System Operator, Inc. and International Transmission Company d/b/a ITCTransmission*, Transmittal Letter, Docket No. ER11-1844-001 at 5-7 (October 20, 2010) ("Joint Application Transmittal Letter"). *But see* discussion in Section V.A below, referencing the statements of MISO witness Chatterjee that benefits are irrelevant.

The Commission tries to distinguish the Green Mountain orders in Order No. 1000-A by implying that the outcome of the Green Mountain proceeding turned solely on the requirements of the MISO tariff. However, the Commission's reasoning in the Green Mountain orders was broader than the Commission admitted in Order No. 1000-A. In *Green Mountain*, the Commission rejected MISO's attempt to charge Green Mountain based on the fact that Green Mountain's ability to serve its retail loads was dependent on transmission service provided by the MISO. The *Green Mountain* orders' insistence that, in order to send a beneficiary a bill, the beneficiary must be a customer that is actually taking a defined service under a regional tariff, undermines the Commission's effort to defend its legal conclusion in Order No. 1000.

The Commission's decision in *Commonwealth Edison Co.* ("*Commonwealth Edison*") reflected the principles announced by the Supreme Court in *Permian Basin.*[50] In *Commonwealth Edison*, the Commission rejected the filing by Commonwealth Edison ("ComEd") – a transmission owner that had departed MISO – of a proposed rate schedule to ComEd's own tariff. The rate schedule proposed to assign to another utility (Ameren) credits accruing to ComEd when ComEd took transmission service from MISO. The rate schedule provided that Ameren could use the credits that ComEd accrued to offset the capital cost component of future MISO administrative charges.

Section 4 of ComEd's proposed rate schedule stated that the Commission's acceptance would "constitute direction to Midwest ISO to charge its administrative costs to [Ameren] pursuant to Schedule 10-A of the Midwest ISO [Tariff], rather than under Schedule 10 of the Midwest ISO [Tariff]."[51] Protestors, including MISO, asserted that this new rate schedule would have the effect of raising rates payable by other MISO transmission customers under a MISO

[50] *Commonwealth Edison Co.*, 129 FERC ¶ 61,298 (2009), *order on reh'g*, 132 FERC ¶ 61,268 (2010).

[51] *Id.* at P 6.

rate schedule. In essence, ComEd's proposed rate schedule would have imposed increased charges on entities with which ComEd had no direct contractual or customer relationship.

In its protest, the Midwest ISO stated:

> ComEd cannot compel the modification of the Midwest ISO Tariff by filing a Section 205 application to establish a new Rate Schedule under its own tariff. …ComEd is not a transmission-owning member of the Midwest ISO and therefore is not authorized to make filings that would affect the rates, terms, or conditions of service under the Midwest ISO Tariff. Moreover, it is *ultra vires* the scope of Section 205 for one utility to make a filing to compel the action of a non-filing utility. …Because ComEd's Section 205 Application contains provisions that are not authorized under Section 205 of the FPA, the instant filing should be rejected with prejudice.[52]

The Commission's order summarily rejected Section 4 of ComEd's proposed rate schedule,[53] acknowledging that only through Section 206 of the Federal Power Act could the Commission approve ComEd's request to amend the tariff of another entity (*i.e.*, MISO).[54] Thus, the Commission in *Commonwealth Edison* implicitly agreed that it is *ultra vires* for one utility to make a filing under Section 205 to assign costs to non-customers.[55]

The *"ultra vires"* conduct protested by the Midwest ISO bears a strong resemblance to the filing submitted by MISO/ITC in the instant proceeding. The Presiding Judge should find, accordingly, that the Joint Application is improper under Section 205 of the Federal Power Act, and reject it.

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[52] *See Commonwealth Edison Co.*, Motion to Intervene and Protest of the Midwest Independent Transmission System Operator, Inc., Docket Nos. ER10-209-000, *et al.*, at 7-8 (November 24, 2009) (footnote omitted).

[53] *See Commonwealth Edison* at P 27.

[54] *Id.* ("Further, we reject section 4 of the proposed rate schedule, which states that our acceptance of the [ComEd] rate schedule shall constitute direction to the Midwest ISO to charge its administrative costs to Ameren pursuant to Schedule 10-A of the Midwest ISO Tariff…. In the meantime, ComEd and/or Ameren may exercise their rights under section 206 of the Federal Power Act to seek to enforce the Midwest ISO Tariff, or amend it if necessary, to recognize the assignment.").

[55] *Id.* at P 17 (summarizing MISO's protest).

B. None of the Cases Cited by Joint Applicants Provide Any Basis for Assessing Costs to the NYISO or its Customers

The decisions of the Commission and the courts cited in the Joint Application Transmittal Letter[56] and in the testimony of MISO witness Webb[57] as supporting the authority to file tariff revisions that purport to apply to non-customers, and assess charges in the absence of a customer or other contractual relationship, are readily distinguishable. Moreover, none of these decisions provides any basis for assessing the costs of ITC's replacement phase-angle regulators (the "Replacement PARs") to the NYISO or to the NYISO's customers. The cited cost allocation orders addressing loop flows all involve the allocation of such costs within a contractually bounded region such as the Midwest ISO or the Western Systems Coordinating Council ("WSCC"). Most of the orders and proceedings cited were based on mutual agreement among the participants regarding the charges to be assessed.

The WSCC order cited in the Joint Application Transmittal Letter[58] addressed a filing, accepted after a paper hearing, of a plan developed collaboratively by the signatories to the WSCC Agreement to address a longstanding loop flow problem.[59] The plan called for the use of controllable devices owned by five of its member utilities, and included a cost allocation and compensation methodology. The plan was approved by 57 of the 64 WSCC members. In noting favorably the collaborative development and approval of the plan, the Commission contrasted attempts to impose charges on neighbors through Section 205 filings: "The Commission has consistently rejected unilateral filings by single utilities proposing to impose charges, terms and

[56] Joint Application Transmittal Letter at 6-15.

[57] Ex. MSO-Tab D at 30:9-19. Mr. Webb's testimony was adopted by MISO witness Chatterjee on January 31, 2012.

[58] Joint Application Transmittal Letter at 13.

[59] *See Southern California Edison Company*, 70 FERC ¶ 61,087 (1995) (footnote omitted) (*"WSCC"*), *subsequent order approving loop flow plan*, 73 FERC ¶ 61,219 (1995).

conditions on a neighboring utility that, according to the filing utility, is responsible for loop flows."[60] In contrast to the WSCC decision, MISO and ITC's October 20, 2010 joint application to amend the MISO tariffs (the "Joint Application") is a unilateral filing seeking to collect charges from NYISO and PJM customers for facilities that (as explained in Section III.D of this brief) were not jointly planned with NYISO and PJM and which are not the subject of a cost allocation agreement.

Underscoring the contrast between the Joint Application and the WSCC case, in *WSCC* the Commission also stated that: "The Commission's policy is that owners and controllers of interstate transmission facilities attempt to resolve loop flow issues on a consensual, regional basis."[61] ITC has admitted that it did not attempt to "attempt to resolve loop flow issues on a consensual, regional basis" before it undertook the planning and construction of the Original PAR or the Replacement PARs. In that context, *WSCC* referred to the Commission's seminal Transmission Pricing Policy Statement, which in turn made clear that loop flow cost allocation in a broader inter-regional context is based on consent: "Of course, such individual utility pricing may be appropriate if there are no objections to the loop flow solution from any affected neighboring utilities or transmission customers."[62] Here, NYISO objects to being shouldered with the costs of a single alleged "solution" (versus other potential solutions, as discussed in Section IV.F of this brief) forced upon it without joint planning or consent.

The Joint Applicants' citation[63] of *Northern Indiana Public Service Co.*[64] only underscores the manner in which the Joint Application violates longstanding Commission policy

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[60] *WSCC* at p. 61,250.

[61] *Id*. at pp. 61,241-2.

[62] *See* Policy Statement, *Inquiry Concerning the Commission's Pricing Policy for Transmission Services Provided by Public Utilities Under the Federal Power Act*, 59 Fed. Reg. 55031 at p. 55037, n.35 (November 3, 1994).

[63] Joint Application Transmittal Letter at 12-13; Ex. MSO-Tab D at 30:9-19.

regarding unilateral filings against entities with no customer or contractual relationship. *Northern Indiana*, as admitted in the testimony of MISO witness Webb,[65] involved a negotiated agreement to share the costs of upgrades designed to address loop flow. In contrast, in the current proceeding, no negotiated agreement with NYISO exists, or was proposed by ITC (or Detroit Edison) before it undertook the planning and construction of the Original PAR or the Replacement PARs.

In *Indiana Michigan Power Co. and Ohio Power Co.*,[66] the Commission rejected a unilateral filing of charges by Indiana Michigan Power Company and Ohio Power Company (both American Electric Power ("AEP") companies) to collect charges from neighboring utilities for their "nonscheduled use" of the filing utilities' transmission systems via unauthorized power flows.[67] The filing consisted of proposed new schedules to the filing utilities' interconnection agreements with those neighboring utilities. In rejecting the filing, the Commission stated:

> While the Commission has left open an option for utilities to seek compensation for unscheduled power flows if the problem cannot be resolved through mutual agreement, this was not intended as an alternative to a good faith attempt at working out the problem. Rather, it was intended as a last resort to address situations that could not be resolved consensually.[68]

MISO and ITC are not proposing to charge the NYISO for the NYISO's unscheduled use of MISO's transmission system. To the contrary, MISO's DFAX analysis suggests that MISO's unscheduled use of the New York State Transmission System could reasonably be expected to exceed NYISO's unscheduled use of the MISO's transmission system. MISO and ITC (and

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[64] 128 FERC ¶ 61,281 (2009) ("*Northern Indiana*").

[65] Ex. MSO-Tab D at 30:16-19.

[66] 64 FERC ¶ 61,184 at p. 62,554 (1993) ("*Indiana-Michigan*").

[67] *Id*. at p. 62,554.

[68] *Indiana-Michigan* at p. 62,543.

ITC's predecessor, Detroit Edison) made no attempt to obtain pre-planning or pre-construction consent of the NYISO or its customers to pay for the Original PAR or the Replacement PARs.

Nor do the judicial decisions offered to support the Joint Application suggest that the Commission possesses authority to file or accept charges to parties that are not in a customer/supplier relationship or otherwise in privity of contract with the utility. *Illinois Commerce Commission v. Federal Energy Regulatory Commission* ("*ICC*")[69] and *Midwest ISO Transmission Owners v. Federal Energy Regulatory Commission* ("*MISO TOs*")[70] involved cost allocation disputes within the boundaries of PJM and the Midwest ISO, respectively, among entities that voluntarily became members/customers of those RTOs. As discussed in Section III.A of this brief, the NYISO and its customers (except to the extent particular NYISO customers may also participate in the MISO's markets) are not customers of the Midwest ISO or ITC, and therefore these decisions lend no support to the propriety of the Joint Application.

The Joint Application Transmittal Letter[71] cites, as supportive of their filing, the Transmission NOPR that became Order No. 1000.[72] However, as discussed in Section IV.B of this brief, application of the cost allocation principles contained in Order No. 1000 – which forbid filings by one region to charge another region for new transmission facilities built within the former's region without the latter's consent – in fact support *rejection* of the Joint Application.

[69] 576 F.3d 470 (7th Cir. 2009).

[70] 373 F.3d 1361 (D.C. Cir. 2004).

[71] Joint Application Transmittal Letter at pp. 10-12.

[72] *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, FERC Stats. and Regs. ¶ 31,323 (2011) ("Order No. 1000"), *order on reh'g*, Order No. 1000-A, 139 FERC ¶ 61,132 (2012) ("Order No. 1000-A").

Finally, the Joint Application Transmittal Letter cites[73] the then-pending filing of the MVP Proposal. However, the Multi Value Project ("MVP") Proposal involved charges for transmission service to MISO customers. The instant proceeding does not involve transmission service charges to MISO customers.[74]

The cases cited by the Commission in Order No. 1000-A,[75] in rejecting legal arguments regarding whether the Federal Power Act requires a customer or contractual relationship as the basis for a tariff filing, do not support the Joint Application. As discussed above in Section I.A above, *Green Mountain* is inconsistent with Order No. 1000-A, and actually supports rejection of the Joint Application. As noted above, *ICC* involved a cost allocation dispute *within* a single RTO region, not between several distinct ISO/RTO regions, as is the case in the current proceeding.

In Order No. 1000-A,[76] the Commission denied that its position on its legal authority under Section 205 of the Federal Power Act to assess charges against entities that are not transmission customers or otherwise contractually responsible for paying the charges represents a unexplained change in policy from that expressed in *American Elec. Power Co.*[77] *AEP I* lends no support to the Joint Application because, as stated in Order No. 1000-A, "[*AEP I*] does not deal with planning and cost allocation for new transmission facilities and expresses no policy with regard to these matters."[78] Moreover, Order No. 1000-A makes clear that *AEP I's* statements about the permissibility of a last-resort unilateral filing were made in the context of a

[73] Joint Application Transmittal Letter at pp. 14-15.

[74] *See* Ex. NYI-5, NYI-6, NYI-9.

[75] Order No. 1000-A at PP 564-584.

[76] *Id.* at PP 583-584.

[77] 49 FERC ¶ 61,377 at p. 62,381 (1986) ("*AEP I*").

[78] Order 1000-A at P 584.

rate to collect transmission charges for unscheduled use (through loop flow) of the filer's system. As discussed above, that is not the context of the Joint Application.

The Commission also refers, in Order No. 1000-A,[79] to the citation by the U.S. Supreme Court in *Morgan Stanley Capital Group, Inc. v. Public Utility District No. 1 of Snohomish County, Washington ("Morgan Stanley")*,[80] of the Court's holding in *Permian Basin* (discussed in Section I.A. of this brief) that "[t]he regulatory system created by the [FPA] is premised on contractual agreements voluntarily devised by the regulated companies." The Commission attempts to avoid, or negate the import of, the Supreme Court's *Permian Basin/Morgan Stanley* holding by arguing that "*Morgan Stanley* never stated that, by refusing to sign a contract, an entity…can limit its obligation…."[81] There are many things that the Supreme Court "never stated" in *Morgan Stanley*, because the corresponding issues were not presented in that case. However, even if one were to assume that the Commission's basis for distinguishing *Morgan Stanley* is valid, prior to Detroit Edison's, ITC's and MISO's planning and construction of the Original PAR or Replacement PARs, the NYISO and its customers were never presented a contract that they could "refus[e] to sign." Instead, MISO and ITC are asking the Commission to require the NYISO and its customers to assume after-the-fact cost responsibility for transmission facilities that were planned and constructed by others.

C. The Joint Application Violates the Commission's Cost Allocation Policies That Preceded Those Reflected in Order No. 1000

As discussed in Section IV.A of this initial brief, the Joint Application's attempts to impose on the NYISO and PJM a super-regional "postage stamp" rate, and to change the

[79] *Id.* at P 567.

[80] 554 U.S. 527, 533 (2008).

[81] Order No. 1000-A at P 567.

allocation of sunk costs, violate the Commission's cost allocation policies that preceded those reflected in Order No. 1000.

D. The Joint Application Is Deficient Under the Commission's Regulations

The Joint Application is deficient under Part 35 of the Commission's regulations, and thus the Joint Applicants cannot meet their burden of proof under the Federal Power Act that the filing is just and reasonable. The deficiencies stem from a failure to provide *any* evidence, as required in Part 35, supporting key cost recovery elements of the filing.

These deficiencies were highlighted during cross-examination of ITC witness Grover by counsel for the New York Transmission Owners. Mr. Grover is ITC's sole witness on rate issues, and MISO did not offer a witness for this purpose – even though the rates are being collected under MISO's tariff.

In particular, the Joint Applicants have failed to provide information justifying the justness and reasonableness of applying rates of return on equity and capital structure that were established in 2003[82] to new customers for new types of charges.[83] In cross-examination, Mr. Grover admitted that the Joint Applicants had not provided any evidence in this proceeding that the return on equity is still a just-and-reasonable rate under today's capital markets,[84] violating Commission policy prohibiting the use of stale data to justify a rate of return.[85] It is likely, in today's interest rate and capital markets environment that such a high rate of return overstates ITC's current costs. Section 35.13(h)(22) of the Commission's regulations requires the submittal of Statement AV, justifying rate of return through provision of current information regarding the

[82] *See ITC Holdings Corp., et al.*, 102 FERC ¶ 61,182 (2003).

[83] Tr. 90:6-90:17.

[84] Tr. 90:23-91:1.

[85] *Cranberry Pipeline Corp.*, 112 FERC ¶ 61,268 at P 25 (2005) (rejecting a pipeline's proposed rate of return because it was based on "stale data" that was "more than three years old").

capitalization of the utility, the cost of debt capital and preferred stock capital, the claimed rate of return on the common equity of the utility and the resulting overall rate of return requested. The Joint Applicants failed to include Statement AV as part of their filing, and therefore are not even in a position to meet their burden of proof for cost recovery.

Similarly, Joint Applicants have failed, as admitted by Mr. Grover,[86] to justify the rate and time period for depreciation of the Replacement PARs. Section 35.13(h)(10) requires the provision of this information, through the inclusion of Statement AJ. Statement AJ was not included in the Joint Application.

The Joint Applicants cannot meet their burden of proof that the rates, terms and conditions of their filing are just and reasonable.

II. WHETHER THE JOINT OPERATING AGREEMENT BETWEEN MISO AND PJM INTERCONNECTION, L.L.C. ("PJM") PRECLUDES ALLOCATION OF COSTS ASSOCIATED WITH THE ITC PARS TO PJM?

The NYISO takes no position on this issue.

However, if it is determined that PJM cannot be charged for any of the costs of the Replacement PARs due to the provisions of the Joint Operating Agreement ("JOA") between PJM and MISO, it becomes even clearer that it would be unjust and unreasonable, and unduly discriminatory, to permit New York customers to be charged for a share of the costs of the Replacement PARs. If this determination is made regarding the JOA, consider the circumstances:

- In 2007 ITC entered into an agreement with Hydro One that obligated ITC to construct, maintain and operate the Replacement PARs. ITC also assumed responsibility for its costs of complying with the agreement.[87]

[86] Tr. 93:23-95:4.

[87] Ex. NYI-49 at 10 (§ 6.1.1); and at 12 (§ 10.3).

- MISO and ITC seek to excuse IESO customers from sharing in any of the costs of the Replacement PARs because the Commission lacks jurisdiction over those entities, and because of investments Hydro One made in other PARs many years ago.

- PJM customers would avoid cost responsibility because of the terms of the PJM/MISO JOA.

- Customers of the MISO Transmission Owners, other than ITC's customers, avoid cost responsibility based on the terms of the MISO's Tariff and MISO's refusal to re-allocate any portion of the cost of the Replacement PARs to other MISO load areas that contribute to Lake Erie loop flow. Exhibit MSO-1B indicates that all MISO load areas, not just ITC's load area, contribute to Lake Erie loop flow. Exhibit NYT-2, an e-mail from the MISO's Gregory A. Troxell to ITC's Thomas Wrenbeck indicates that MISO is unwilling to charge MISO Transmission Owners, other than ITC, or their customers, for any portion of the cost of ITC's Replacement PARs. MISO witnesses Mallinger and Chatterjee have both stated, in their filed testimony and on cross-examination, that the MISO Transmission Owners, other than ITC, and their customers, will benefit from the Replacement PARs.[88]

- NYISO customers invested in PARs at the New York/PJM border, and at the New York/Ontario border that assist with loop flow control (see Exhibit NYI-38, at 21:20-25:10), and are paying for NYISO's implementation of various Broader Regional Markets initiatives that are intended to reduce or address Lake Erie loop flow, but are not being given the same credit that MISO and ITC propose to provide to Hydro One/IESO customers for Hydro One's construction of the Hydro One PARs at the MI/ON Interface.

- New York does not share a common border with ITC or MISO (the MISO and NYISO regions are divided by the Province of Ontario), so NYISO has not previously had reason to enter into a joint operating agreement with the MISO. Nor had MISO sought an agreement with the NYISO addressing the joint construction of transmission facilities prior to the submission of the Joint Application.

- ITC and MISO seek to assign a share of the cost of the Replacement PARs to the NYISO because NYISO is the only (distant) neighbor that MISO is not affirmatively precluded, by contract, from charging.

This set of facts makes it exceedingly clear why the Commission has repeatedly decided (in Order No. 1000, and under prior precedent) that a formal, regional planning process with an

[88] *See* Webb/Chatterjee testimony (Ex. MSO-Tab D at 13:1-7); Ex. MSO-1B (indicating that all MISO load areas contribute to Lake Erie loop flow); Ex. MSO-3 at 14:21-23; Tr. 561:2-5.

opportunity for stakeholders to have input is an absolute necessity before the cost of facilities can be imposed on a neighboring region. Here, ITC is seeking to spread the cost of its Replacement PARs to an area that had no say in the decision that ITC made to construct the Replacement PARs. The failure of ITC to utilize a planning process that included entities that they intended to charge, or to negotiate a cost sharing agreement prior to undertaking contractual commitments to construct the PARs, dictates rejection of the Joint Application.

III. WHETHER THERE ARE ANY OTHER CUSTOMER OR CONTRACTUAL RELATIONSHIPS OR INTERREGIONAL PLANS, OR LACK THEREOF, THAT ARE RELEVANT TO THE PROPOSED COST ALLOCATION?

A. There Is No Customer or Contractual Relationship Between the NYISO or the NYISO's Customers and MISO or ITC

MISO and ITC have not identified any customer or contractual relationship with either NYISO or its customers that present a valid basis for assessing the NYISO or its customers charges for the costs of the Replacement PARs. Section 1.652 of the MISO's Open Access Transmission, Energy and Operating Reserve Tariff (the "MISO Tariff") defines who is a MISO "Tariff Customer" as a "Market Participant, Transmission Customer or Coordination Customer." The NYISO is not a MISO Market Participant,[89] Transmission Customer[90] or Coordination Customer,[91] as each term is defined in the Midwest ISO Tariff. MISO has stated that NYISO is not currently a Transmission Owner, Transmission Customer or Market Participant under the MISO Tariff.[92] MISO has also stated that it does not have any Tariff obligation to provide

[89] The NYISO has not registered with, or been qualified by, the Midwest ISO as a Market Participant. *See* Midwest ISO Tariff at § 1.384.

[90] The NYISO has not executed a transmission Service Agreement or requested the Midwest ISO to file with the Commission an unexecuted Service Agreement. *See* Midwest ISO Tariff at § 1.666.

[91] The NYISO is not taking Coordination Services from the Midwest ISO under Module F of its tariff. *See* Midwest ISO Tariff at § 1.98.

[92] *See* Ex. NYI-5.

reliable service to the NYISO, or to the NYISO customers that are paying for a portion of the cost of the Replacement PARs.[93]

In the hearing, ITC witness David Grover admitted that neither the NYISO nor the New York Transmission Owners ("NYTOs") are customers of ITC.[94] Mr. Grover also stated that he was unaware of any agreement by either the NYISO or the NYTOs to pay the rates proposed in this proceeding.[95] Neither MISO nor ITC introduced any evidence of either a customer or contractual relationship between the MISO and the NYISO or the NYISO's customers.

The absence of a customer or contractual relationship between the NYISO, or the NYISO's customers, and MISO or ITC is underscored by the specific disclaimer MISO and ITC have made that the tariff revisions proposed in the Joint Application do not include any service obligation to the NYISO, or to the NYISO's customers. As noted above, MISO takes the position that "NYISO is not a MISO Transmission Owner, Transmission Customer, or Market Participant, and MISO does not have service obligations to NYISO related to these categories."[96] Similarly, MISO answered "no" to the NYISO's question as to whether MISO and/or ITC would be "subject to an obligation to provide reliable service to NYISO customers…that are not otherwise MISO customers."[97]

The NYTOs asked ITC in a data request to "describe what service obligation ITC would have to the NYISO or any NYTO to the extent the NYISO or any NYTO is required to pay for any portion of the Replacement PARs."[98] ITC responded: "As far as ITC knows, none."[99]

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[93] *See* Ex. NYI-6.

[94] Tr. 92:17-25.

[95] Tr. 91:14-18.

[96] *See* Ex. NYI-5.

[97] *See* Ex. NYI-6.

[98] *See* Ex. NYI-9.

As discussed in Section I.A of this brief, as a legal matter, the Federal Power Act forbids a public utility to file a rate that imposes charges on entities that have no customer or contractual relationship with the public utility. Because the MISO and ITC have no contractual or customer relationship with the NYISO or its customers, the Commission should reject the Joint Application.

B. The Original PAR and the Replacement PARs Were Built Pursuant to Pre-Existing Contract Obligations, and to Serve the Transactional/Economic Interests of Michigan and Ontario Utilities and their Electricity Customers

1. The Original PAR and the Replacement PARs Were Built Pursuant to Pre-Existing Contract Obligations

The costs of the Original PAR and the Replacement PARs were incurred due to contract obligations that Detroit Edison and ITC voluntarily assumed, and to serve the interests of Michigan and Ontario utilities and their electricity customers. As explained in NYISO witness Pike's testimony,[100] in 1998, Detroit Edison (ITC's former parent company), Ontario Hydro (the pertinent part of which is now Hydro One Networks Inc.) and Consumers Energy Company entered into an Interconnection Facilities Expansion Agreement (the "1998 Facilities Agreement").[101] In Section 3.2 of the 1998 Facilities Agreement Detroit Edison agreed, at its own expense, to install and operate the Original PAR on the B3N transmission line that interconnects Michigan and Ontario,[102] and in Section 3.1, Ontario Hydro agreed to install and operate a PAR on the Ontario side of each of the other three major transmission lines (J5D, L51D and L4D) that comprise the Michigan/Ontario Interface or "MI/ON Interface."[103] The

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[99] *Id.*

[100] Ex. NYI-46 at 3:20-4:15.

[101] The 1998 Facilities Agreement is Ex. NYI-48.

[102] Ex. NYI-48, at 2.

[103] Ex. NYI-48 at 1-2.

three PARs constructed by Ontario Hydro (now Hydro One) are referred to herein as the "Hydro One PARs." Each of the Hydro One PARs is associated with a distinct transmission line, so three of the four transmission lines at the MI/ON Interface are associated with Hydro One PARs.[104]

Detroit Edison and Ontario Hydro agreed to construct the Original PAR and the Hydro One PARs to prevent or control power flows that were interfering with scheduled transactions between Michigan and Ontario.[105] On cross-examination, ITC witness Capra agreed that the interruption of scheduled transactions between Michigan and Ontario in 1998 was at a sufficient level that it could reasonably be expected to have caused Detroit Edison to be willing to install the Original PAR.[106] Mr. Capra's testimony also quotes from Detroit Edison's request to the Department of Energy for authorization to construct the Original PAR and other facilities at the MI/ON Interface.[107] That application explains that in 1998 over 8,500 MW of transactions scheduled between Ontario Hydro and utilities in Michigan were curtailed via TLRs.

Section 3.7 of the 1998 Facilities Agreement states, "Hydro and Edison shall each be responsible for the performance of operation and maintenance, extraordinary maintenance and repair, *which can include replacement,* of the New Equipment and New Facilities [defined to include the Original PAR] which are owned by them, including all costs associated therewith."[108] A 2006 e-mail from ITC employee Vitez to MISO employee Webb states that the replacement phase shifter at issue in this proceeding is essentially a "'replacement-in-kind' type

[104] Ex. NYI-46 at 4:7-9.

[105] Ex. NYI-48 at 9.

[106] Tr. 142:12-146:4.

[107] Ex. ITC Tab F at 5:8-6:34.

[108] Ex. NYI-48 at 3 (emphasis added).

project."[109] Similarly, an ITC data response indicates that the Replacement PARs project "was approved as a like for like replacement."[110]

In 2007, ITC (successor to Detroit Edison) and Hydro One entered into a new Interconnection Facilities Agreement (the "2007 Facilities Agreement").[111] In Section 10.3 of the 2007 Facilities Agreement ITC agreed to install two replacement PARs at Bunce Creek to replace the Original PAR, stating specifically: "[d]ue to the failure of the Phase Angle Regulator referenced in Subsection 10.2(a) above [i.e., the Original PAR], ITC agrees to install one or more Phase Angle Regulators with a combined total capacity of at least 645 MVA in the B3N Interconnection terminal at its Bunce Creek Station."[112] Section 6.1.1 of the 2007 Facilities Agreement states that each party shall bear their own costs of compliance with the Agreement, except as specifically provided therein.[113] Thus, ITC entered into a contractual obligation to construct the Replacement PARs at its own expense before it so much as suggested that New York should pay for a portion of the cost of the Replacement PARs.

2. The Original PAR and the Replacement PARs Were Built to Serve the Transactional/Economic Interests of Michigan and Ontario Utilities and their Electricity Customers

As confirmed in the review that follows of the pertinent contractual, testimonial, Detroit Edison/ITC, and regulatory materials, ITC elected to construct, and pay for, the Replacement PARs in order to better serve the transactional and economic needs of the utilities and their customers.

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[109] Ex. NYI-53.

[110] Ex. NYI-54.

[111] Ex. NYI-49.

[112] Ex. NYI-49 at 12.

[113] Ex. NYI-49 at 10.

Contractual evidence is supplied in the 1998 Facilities Agreement between Detroit Edison (predecessor in interest to ITC) and Ontario Hydro (predecessor in interest to Hydro One). Schedule "A" to the 1998 Facilities Agreement, titled "Basic Principles of Ontario-Michigan Phase Shifter Operation," states that Ontario Hydro and Detroit Edison "intend to improve reliability of bulk power supply by adding and modifying facilities … to control circulating power flows that would otherwise interfere with the ability to carry out scheduled transactions" and that the PARs would be "operated primarily to control power flow circulating through the electrical systems of the parties in order to protect the parties' respective transmission facilities and to facilitate transactions between and among the parties."[114]

ITC witness Capra's testimony similarly recognizes that removal of obstacles to Ontario-Michigan trading was the fundamental reason that Ontario Hydro and Detroit Edison decided to install the Hydro One PARs and the Original PAR on the B3N circuit. Mr. Capra's testimony states that "[t]he fundamental purpose of the joint Detroit Edison Company and Ontario Hydro proposal to add additional PARs on the interconnections between what was then the Detroit Edison Company and Ontario Hydro was to improve the reliability of the bulk power system by controlling circulating loop flows around Lake Erie that would otherwise interfere with the ability to carry out scheduled transactions."[115] Mr. Capra's testimony also quotes from Detroit Edison's request to the Department of Energy for permission to construct the Original PAR and other facilities at the MI/ON Interface. The application states, as a premise for the filing, that in 1998 over 8,500 MW of transactions scheduled between Ontario Hydro and utilities in Michigan were curtailed via TLR.[116]

[114] Ex. NYI-48 at 9.

[115] Ex. ITC Tab F at 4:21-5:3.

[116] Ex. ITC Tab F at 6:12-6:16.

The application of TLR procedures to curtail transactions between Michigan and Ontario at the MI/ON Interface remain an obstacle to commerce between MISO and IESO today. As described in the testimony of NYISO witness Pike,

> Over [the time period from January 1, 2009 through December 31, 2011], more than 1,900 transactions that were scheduled over the MI/ON Interface between Ontario and MISO were curtailed or removed via TLR actions. Those transactions represented more than 100,000 MW of scheduled interchange between Ontario and Michigan that was prevented or interrupted via TLR.[117]

The reduction of TLRs affecting transactions scheduled over the MI/ON Interface does not provide benefits to New York. NYISO witness Pike reviewed transaction schedule data stored in the NYISO's Market Information System ("MIS") for calendar year 2011 and determined that only four-tenths of one percent of the NYISO's total real-time scheduled interchange sourced from, or sank in MISO.[118] These are the only transactions that could possibly have been scheduled across the MI/ON Interface.[119] A portion of the NYISO/MISO interchange Mr. Pike identified is scheduled through PJM's Balancing Authority Area, not over the MI/ON Interface, so the component of NYISO interchange that is scheduled over the MI/ON Interface is a small fraction of one percent of the NYISO's scheduled interchange with its neighbors. Unlike MISO, ITC, IESO and Hydro One, the potential economic harm to NYISO from TLRs of transactions scheduled across the MI/ON Interface is negligible.[120]

Corporate documents also confirm that the purpose of the MI/ON PARs is to facilitate economic trades between Ontario and Michigan. A November 12, 1998 internal Detroit Edison

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[117] Ex. NYI-46, at 10:6-10:10 (as corrected at hearing on September 12, 2012; Tr. 932:2-5), and the supporting information supplied in Ex. NYI-77.

[118] *See* Ex. NYI-46 at 10:14-21.

[119] The provisions of the NYISO tariff prohibiting circuitous scheduling would prevent other transactions from being scheduled to New York across the MI/ON PARs. *See New York Independent System Operator, Inc.*, 124 FERC ¶ 61,174 (2008); *New York Independent System Operator, Inc*., 125 FERC ¶ 61,184 (2008).

[120] Ex. NYI-46 at 10:14-11:5.

memorandum that describes the Original PAR as part of a project that is the "solution" to an increase in Lake Erie loop flow that "has reduced our ability to import power from Ontario Hydro….This project provides both a benefit in importing more power from OH through increased capacity and by blocking the loop flow and the additional benefit of obtaining more import capability on either the [MI/ON] or Southern Interface, therefore, providing operating flexibility."[121] Hence, Detroit Edison recognized that the installation of the Original PAR would improve its ability to import power from Ontario, and its ability to import power into Michigan from the South. The circumstances under which New York might benefit from the operation of the Replacement PARs are more limited.[122]

In addition, the Detroit Edison memorandum lists eleven separate "major benefits" Detroit Edison expected to receive from the installation of the Original PAR:

> 1. A maximum increase in capacity of 1000 MW's, or 500 MW of <u>fixed capacity</u> increase and ±500 MW's of <u>controllable</u>. [Emphasis in original.]
>
> 2. A reduction in loss capacity of about $1.1M/yr and a reduction in energy losses of about $.8M/yr.
>
> 3. A reduction in TLR's (from 25 to 7 for last year) – 18 TLR's could be eliminated by this project.
>
> 4. An increase in revenue through additional power sales.
>
> 5. A reduction in our cost for transmission service (for example, transmission service through OH [i.e., Ontario Hydro] is lower than through AEP when open access occurs in OH on July 2000).
>
> 6. A reduction in the uncertainty in planning and scheduling power. Less purchase power options are needed because more sources are available from the East and South.
>
> 7. If an emergency occurs, more resource options are available.

[121] Ex. NYI-56 at 1.

[122] *See* Section V.D of this initial brief.

> 8. The Operation and Facilities agreements with OH are nearly finalized and DE will realize 400 MW of QFW capacity increase from OH during emergencies; and receive favorable treatment of incremental capability from the South when phase shifters are blocking (***if DE drops out of the this project, OH will undoubtedly operate phase shifters in full block during high LEC and therefore DE would have reduced capabilities from the South***.). [Emphasis added.]
>
> 9. We have negotiated very favorable positions with respect to the cost of facilities for DE (phase shifter at $.7M below next bidder, and autotransformer $.5M below next bidder – re-bidding at a later date will increase these costs by about $2M).
>
> 10. The market power concern for DE would be reduced by increasing the OH-MI import capability up to 1000 MW.
>
> 11. During the transition period of open access, DE may be required to provide back up, unless increased import capability allows customers access to external markets.[123]

The memorandum indicates that one of the reasons Detroit Edison decided to construct the Original PAR was a concern about how Ontario Hydro would operate the PARs on the MI/ON Interface if Detroit Edison declined to participate in the project by installing the Original PAR on the B3N circuit:

> …OH would install the three phase shifters in the B3N, L51 and L4D, respectively, and DE would be disadvantaged due to the reduction in import capability from the South….[124]
>
> …if DE drops out of this project, OH will undoubtedly operate phase shifters in full block during high LEC and therefore DE would have reduced capabilities from the South….[125]

If Ontario Hydro constructed all of the PARs at its own expense, it was expected to operate the PARs "in full block during high [Lake Erie Circulation]," to the detriment of Detroit Edison. By agreeing to construct the Original PAR itself (rather than letting Ontario Hydro construct the B3N PAR), Detroit Edison gained a say in the how the MI/ON PARs would be

[123] Ex. NYI-56 at 2-3.

[124] Ex. NYI-56 at 2.

[125] Ex. NYI-56 at 3.

operated. Detroit Edison's decision was based on the opportunity to increase capacity imports into Michigan either from the north (Ontario) or from the south. The Detroit Edison internal memorandum does not consider, discuss, or address expected or potential benefits to other Lake Erie control areas. Instead, the memorandum shows that Detroit Edison decided to construct the Original PAR to benefit itself, its service territory and its customers.

In addition to operational benefits, the memorandum reflects that Detroit Edison expected to gain regulatory benefits from the construction of the MI/ON PARs. Item 10 of the memorandum (quoted above) indicates that "market power concern for DE would be reduced by increasing the OH-MI import capability up to 1000 MW."[126] In particular, the Michigan Public Service Commission ("MPSC") was concerned, in the context of its initiative to restructure the Michigan electric utility industry, about Detroit Edison's ability to exercise market power in its service territory.[127] The addition of 1000 MW of import capability was presumably expected to reduce this concern by providing the opportunity for additional supply to compete to serve load in Detroit Edison's service territory.

That the construction of the Original PAR was intended to enhance Michigan power supply through increased transactions with Ontario is verified through ITC's submission of a portion of a December 2000 "Joint Report" to the MPSC in Case No. U-12781.[128] The purpose of the Joint Report, filed by several Michigan utilities, was to describe how the utilities would satisfy the requirements of a 2000 Michigan law to increase import capability from Ontario by 2000 MW. In the Joint Report, ITC stated that it had installed the Original PAR, which,

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[126] Ex. NYI-56 at 3.

[127] *See In the matter, on the Commission's own motion, to consider the restructuring of the electric utility industry*, Case No. U-11290, Michigan Public Service Comm'n, 1997 Mich. PSC LEXIS 171 at *62-*72; 177 P.U.R.4th 201(1997).

[128] Ex. NYI-58.

> operating in concert with similar phase angle regulators added by Hydro One in the L4D and L51D interconnections, as well as the existing phase angle regulator in the J5D interconnection, enables the control of 600-700 MW of parallel path flow north of Lake Erie (Lake Erie circulation). As this circulating power was using a significant portion of the International Transmission Company-Ontario interface, the control of 600-700 MW of circulating power translates into an increase in the firm commercial capability of that interface. ***In total, the Hydro One to [Michigan] path will realize an increase of 820 MW of firm commercial capability from 2000 to 2002.***[129] [Emphasis added.]

Detroit Edison and ITC thus relied on the construction of the Original PAR to satisfy regulatory obligations to which they were subject in the State of Michigan. The NYISO's customers do not gain any benefit from efforts related to the implementation of effective retail competition in the State of Michigan.

The evidence submitted in this proceeding makes it clear that ITC carefully considered whether the Replacement PARs would be beneficial to ITC, and considered alternatives to constructing the Replacement PARs, before it entered into the 2007 Facilities Agreement. Exhibits NYT-38 and NYI-60 illustrate the deliberations ITC and MISO engaged in before they decided to construct the Replacement PARs.

Exhibit NYT-38, an internal ITC e-mail from 2004 discusses economic considerations that ITC employees Thomas Vitez and Richard Schultz were considering: "In short, if we believe prevailing flow will be from West to East – Comed/AEP to PJM and Ontario imports, then maybe B3N being permanently gone isn't the worst thing. If interface limits East to West, then B3N is probably the least expensive way to support needed ITC import capability."[130]

Exhibit NYT-38 also identifies several alternatives to constructing the Replacement PARs that ITC's employees considered. The exhibit recounts a discussion between Mr. Vitez (ITC) and a Hydro One employee about the possibility of converting the MI/ON Interface to

[129] Ex. NYI-58 at 9.

[130] Ex. NYT-38 at 2.

high voltage direct current (HVDC) control ("got the impression from him that Hydro One was luke warm on HVDC at the interface – too expensive and the politics would be brutal").[131] The e-mail also raises the possibility of installing a stronger tie between American Electric Power ("AEP") and ITC to reduce Lake Erie loop flow that is caused by Detroit Edison's imports from AEP. Exhibit NYT-38 states that approximately 15% of Detroit Edison's imports from AEP (to the south) enter ITC's service territory over the MI/ON Interface.[132] The potential solutions discussed in NYT-38 are representative of the types of planning deliberations that the NYISO and its stakeholders were not given the opportunity to participate in. As a result, the NYISO and its customers were not provided a comparable opportunity to evaluate alternatives and make a choice about whether the Replacement PARs would be a worthwhile investment for New York, when compared to possible alternatives.

C. The MISO-IESO Operating Instruction Permits MISO and IESO to Favor Their Own Customers and Interests, Over the NYISO's and PJM's Customers and Interests

Another contract whose terms demonstrate that charging the NYISO or its customers for a share of the costs of the Replacement PARs would be unjust and reasonable is the Operating Instruction entered into by MISO and IESO for the operation of the MI/ON PARs.[133] The Operating Instruction was included with the final documentation that ITC submitted to DOE in connection with its Presidential Permit proceeding addressing the addition of the Replacement PARs. As discussed in Section IV.E.2 of this initial brief, the terms of the Operating Instruction permit MISO and IESO to favor their own customers and interests, over the NYISO's and PJM's customers and interests.

[131] Ex. NYT-38 at 2.

[132] *Id.*

[133] The Operating Instruction is Ex. NYI-3 at 50-59.

D. Neither the Original PAR nor the Replacement PARs Were Planned Jointly with NYISO and PJM

Neither the Original PAR nor the Replacement PARs were planned jointly with PJM and NYISO.

Although the testimony of MISO witness Chatterjee states that the Original PAR "was vetted through the joint planning structure that existed at the time,"[134] Mr. Chatterjee does not claim that planning process was an interregional planning process that included NYISO or PJM. The Joint Applicants have submitted no evidence of joint planning for the Original PAR, and can only assert that "Lake Erie Loop Flow was identified as an issue worthy of interregional attention as early as 1999."[135] In that context, Mr. Chatterjee refers to the MAAC-ECAR-NPCC Study Committee's "Michigan-Ontario Phase Angle Regulator Study: An Interregional Perspective"[136] (the "MEN Study").[137]

However, as explained by NYISO witness Smith, a review of the MEN Study makes clear that it is, in no sense, a multi-regional planning study to determine whether the Original PAR (and the Hydro One PARs) were appropriately designed, or whether they were the best, most cost effective, or the most appropriate facility to construct.[138] Nor did the MEN Study address any sort of allocation of the costs of the Original PAR among the regions that participated in the study. Instead, the study was initiated "[i]n order to ensure continued reliable operation of the interconnected regional systems"[139] following the proposed installation of the

[134] Ex. MSO-Tab D at 22:2-3.

[135] *Id.* at 21:6-7.

[136] *Id.* at 19:11-18.

[137] Ex. NYI-44.

[138] Ex. NYI-38 at 20:7-21:14.

[139] Ex. NYI-44 at 39.

Original PAR. Section 4.3 of the MEN Study states that the procedure employed will be "to study the impact on transfer capability of the new phase angle regulator transformers…"[140]

By contrast, a true interregional planning effort would have involved multiple utilities across the Lake Erie region seeking a joint solution, or a collaboration among the reliability councils to the same end. Instead, it is clear from the "Scope of Study" in Appendix D that the installation by Detroit Edison and Ontario Hydro of the Original PAR and the Hydro One PARs was considered a *fait accompli*: (i) the study proceeds from the fact that "In January 1999, Detroit Edison and Ontario Hydro announced plans to modify the existing interconnection facilities between Michigan and Ontario;"[141] and (ii) the study recognized that those entities were proceeding with those plans in the very near future by stating "[t]he incorporation of Phase Angle regulators on all Michigan-Ontario Tie lines is intended to be complete by summer of the year 2000."[142]

Mr. Smith's testimony that the MEN Study was not a joint planning study was not rebutted by the Joint Applicants.

In Exhibit MSO-Tab D MISO witness Chatterjee states that the Replacement PARs were planned in the MISO's Market Transmission Expansion Planning ("MTEP") process.[143] The planning process to which Mr. Chatterjee refers (MTEP06) occurred wholly within the MISO structure,[144] and without participation by NYISO.[145] MISO subsequently admitted that the Replacement PARs were not jointly planned with NYISO or PJM. MISO's planning process

[140] Ex. NYI-44 at 16.

[141] Ex. NYI-44 at 15.

[142] Ex. NYI-44 at 39.

[143] Ex. MSO-Tab D at 20:1-18.

[144] *Id.* at 22:3-6.

[145] Ex. NYI-45 at 1.

requires that all parties that are subject to an allocation of the costs of a transmission facility be provided an opportunity to participate.[146] In its response to data request NYISO/MISO 1-28, MISO admitted that MISO never asked or invited the NYISO to discuss the design, costs or cost allocation for the Replacement PARs (as part of MISO's MTEP06 process, or otherwise).[147] MISO also admitted that NYISO has never participated in MISO's MTEP planning process.[148] In an August 24, 2010 e-mail from MISO witness Chatterjee to other MISO personnel, Mr. Chatterjee stated that "We did not do a coordinated study with PJM to approve the [Replacement PARs] project."[149]

Because the MI/ON PARs were not jointly planned with NYISO, PJM, NYISO's stakeholders or PJM's stakeholders, NYISO and PJM had no say in the design or decision to construct the Original PAR or the Replacement PARs. As discussed in Sections IV.A and IV.B of this brief, Commission precedent and policy (both pre- and post-Order No. 1000) preclude a utility or region from charging neighboring utilities or regions for the costs of facilities that were not jointly planned. Accordingly, the Joint Application should be rejected insofar as it seeks to charge NYISO, PJM, or their customers.

[146] Ex. NYT-8 at l.

[147] Ex. NYT-10 at 1.

[148] Ex. NYI-45 at 1.

[149] Ex. NYT-2 at 1.

RATE ISSUES

IV. WHETHER THE ALLOCATION OF THE COSTS OF THE ITC PARS TO NYISO AND PJM, AND THE LEVEL OF SUCH ALLOCATIONS, IS JUST, REASONABLE AND NOT UNDULY DISCRIMINATORY OR PREFERENTIAL UNDER THE FEDERAL POWER ACT AND THE APPLICABLE COMMISSION POLICIES, ORDERS AND PRECEDENT THEREUNDER (INCLUDING BUT NOT LIMITED TO THE POLICIES, IF APPLICABLE, CONTAINED IN ORDER NO. 1000)?

A. Acceptance of the Joint Application's Proposal to Charge NYISO and PJM Would Violate Applicable Commission Precedent

Commission precedent addressing "postage stamp" rates and recovery of "sunk" transmission costs requires the rejection of MISO's and ITC's proposal to allocate to the NYISO and PJM regions a share of the costs of ITC's Replacement PARs. Costs ITC incurred to construct the Replacement PARs are not eligible for allocation outside the ITC transmission zone because the Replacement PARs were not constructed as part of an inter-regional planning process that included NYISO, PJM or the stakeholders of these regional organizations. In addition, it would be unjust, unreasonable, unduly discriminatory, unduly preferential and unduly prejudicial to allocate the costs of the Replacement PARs using a license plate rate within the MISO region, but using a super-regional postage stamp rate to allocate the costs of the same facilities outside the MISO region.

1. Introduction to Postage Stamp and License Plate Rate Terminology, and the Difference Between "Zones" and "Regions"

The Commission has described the fundamentals of license plate and postage stamp rates in a number of orders. "Under a license-plate (or zonal) rate design, a customer pays the embedded cost of transmission facilities that are located in the same zone as the [transmission] customer. A customer does not pay for other transmission facilities [located] outside of the zone, even if the customer engages in transactions that rely on" facilities located outside the zone

where it is located, but within the same overall region.[150] "The use of license-plate rates is essentially the same as allocating existing system costs to the parties for whom the investment was originally made."[151] "Consider that registering a car in one state, paying that state's fees, and obtaining a license plate from that state, allows that car to be driven on the roads and highways of all other states."[152] Accordingly, the license plate rate each customer pays reflects the cost of existing transmission facilities within the zone (traditional utility service territory) where it is located. The license-plate rate is also known as "zonal rate."

Under a postage stamp rate design, all transmission service customers in a region pay a uniform rate per unit of service, based on the aggregated costs of all transmission facilities in the region[153] regardless of the contractual origin or destination of the electricity transmitted. Under a postage stamp rate, every customer in the region pays the same average rate regardless of the cost caused or benefit derived from a particular transaction.

When used in the context of discussing license plate and postage stamp rates, a "region" represents the service territory of an ISO or RTO and a "zone" is, generally speaking, the traditional transmission service territory of each transmission owner within a region.[154]

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[150] *PJM Interconnection, L.L.C.*, Order On Rehearing And Compliance Filing, Opinion No. 494-A, 122 FERC ¶ 61,082 at n. 2 (2008) ("Opinion No. 494-A").

[151] Opinion No. 494-A at n. 28.

[152] *Regional Transmission Organizations*, Order No. 2000 at n. 619, FERC Stats. & Regs. ¶ 31,089 (1999) ("Order No. 2000"), *order on reh'g*, Order No. 2000-A, FERC Stats. & Regs. ¶ 31,092 (2000), *aff'd sub nom. Pub. Util. Dist. No. 1 of Snohomish County, Washington v. FERC*, 272 F.3d 607 (D.C. Cir. 2001).

[153] *PJM Interconnection, L.L.C.*, Opinion No. 494, 119 FERC ¶ 61,063 at P 18 (2007) ("Opinion No. 494"), *order on reh'g*, Opinion No. 494-A, 122 FERC ¶ 61,082 (2008); *see also Midwest Independent Transmission System Operator, Inc.*, 114 FERC ¶ 61,106, *order on reh'g.*, 117 FERC ¶ 61,241 (2006); Opinion No. 494-A, at n. 4; Opinion No. 494, at n. 2; and *American Electric Power Service Corp. v. Midwest Independent Transmission System Operator, Inc., et al.*, 122 FERC ¶ 61,083 at n. 30 (2008).

[154] Opinion No. 494 at PP 1-3.

2. Even For Cost Allocation Within A Single ISO/RTO Region, The Commission Has Placed Strict Limits on Cost Sharing

The Commission's traditional default cost allocation mechanism within a single ISO or RTO region is the license plate rate, which requires that the costs of a transmission provider's facilities be paid for by that transmission provider's customers, irrespective of the benefits those facilities might provide to customers located outside the transmission provider's zone. Although the Commission has expressed a desire to move away from license plate rates, and toward postage stamp rates that might better reflect the regional benefits that certain transmission facilities provide, it has repeatedly endorsed – for reasons of equity and efficiency – the use of license plate rates in its efforts to facilitate the development of ISOs and RTOs.[155] In recent years, the Commission has gradually moved toward the use of postage stamp rates, but only for facilities that are to be constructed in the future and that are developed in accordance with a Commission-accepted regional joint planning process.[156]

a. The Commission has repeatedly rejected a shift to postage stamp rates for existing transmission facilities, particularly where the facilities were constructed by individual transmission owners to benefit their own customers

Commission decisions addressing the allocations of transmission costs in PJM and MISO are directly applicable to the Joint Application. These decisions, which have repeatedly rejected efforts to impose postage stamp rates for existing transmission facilities, strongly undercut the proposal to reallocate a share of the costs of the Replacement PARs to the NYISO's customers.

[155] *See PJM Interconnection, L.L.C.*, 96 FERC ¶ 61,060 at p. 61,220 (2001); *Cleco Power LLC, et al.*, 103 FERC ¶ 61,272 at P 28 (2003); *Southwest Power Pool, Inc*., 111 FERC ¶ 61,118 at P 35 (2005); *Bonneville Power Administration*, 112 FERC ¶ 61,012 at P 96 (2005).

[156] Opinion No. 494 at P 4.

i. Opinion No. 494

In Opinion No. 494, the Commission's resolution of rate design issues in PJM, the Commission affirmatively rejected a request to implement postage stamp rates for existing facilities. Instead, the Commission required that license plate rates remain in effect for existing transmission facilities, even though many of those facilities provide benefits to ratepayers outside of their local zones.[157]

The Commission's rationale for mandating the use of license plate rates for existing facilities is premised on four core factors. The first is the fact that "existing facilities represent sunk costs that were built primarily by individual utilities to serve their own internal needs and were financed by those utilities."[158] The Commission explained that because "transmission owners in PJM built their existing infrastructure primarily to accommodate the needs of their own customers,"[159] it is appropriate to require that those customers bear the costs of that infrastructure. The Commission rejected arguments that ancillary beneficiaries should bear a portion of the costs of such facilities, even if those benefits are a result of unanticipated or new uses of the system, because the "fact that the transmission system is used today in ways that differ from when the facilities were first constructed does not, standing alone, provide a basis for finding that a license plate rate design is no longer just and reasonable."[160]

The second, related, factor revolves around the fact that the "sunk transmission costs in question were not planned and constructed to maximize benefits on a region-wide basis"[161] as part of a region-wide planning process. Instead, as noted above, the transmission facilities were

[157] Opinion No. 494 at P 49.

[158] *Id.* at P 50.

[159] *Id.* at P 51.

[160] *Id.*

[161] *Id.* at P 54.

constructed by each individual transmission owner for the benefit of its own ratepayers. In the absence of a region-wide planning process intended to maximize benefits on a regional basis, the Commission held that it was just and reasonable for the costs of existing transmission facilities to be recovered through license plate rates from the constructing transmission owner's transmission customers.

The third factor involves economic efficiency, and the provision of appropriate incentives for construction of new transmission facilities. The Commission stated that "one of the goals in allocating costs is to promote economic efficiency, [and] reallocation of the sunk costs of already built facilities will not affect future investment decisions."[162] The Commission went on to explain that:

> the allocation of the sunk costs of existing transmission facilities has no significant impact on investment decisions associated with new transmission facilities. A reallocation of costs for existing facilities will not affect a transmission owner's future decision about whether and where to build new transmission facilities. Rather, it is the cost allocation method for new transmission facilities that influences the incentive to invest.[163]

The fourth factor is the fact that "[a]n abrupt shift away from license plate rates would . . . result in inequities within PJM."[164] Specifically, the Commission was concerned that the use of postage stamp rates for existing facilities would abruptly impose additional costs on third parties that had no notice that such costs would be imposed on them, and that had no input into whether, or how, such facilities should be constructed.[165]

Each of the factors listed above dictate against the Joint Applicants' cost-sharing proposal. First, as explained in Section III.B.2 of this initial brief, the Original PAR and the

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[162] *Id.* at P 53.

[163] *Id.*

[164] *Id.* at P 57.

[165] *Id.*

Replacement PARs were constructed to benefit Ontario and Detroit Edison/ITC customers, and to facilitate trading between Michigan and Ontario. Second, as explained in Section III.D of this initial brief, the Replacement PARs were not planned and constructed to maximize benefits across a combined MISO, PJM, IESO and NYISO region under a planning process that covered a combined MISO, PJM, IESO and NYISO region. As explained in Section IV.A of this initial brief, the Replacement PARs were included in the MTEP06, which is the planning process for (only) the MISO region, but they were not determined to be eligible for broad postage stamp cost allocation, even *within* the MISO region. Third, the costs of the Replacement PARs are sunk costs: the construction of the Replacement PARs was nearly complete at the time the Joint Application was submitted. Permitting ITC to reallocate the cost of these completed transmission facilities is not necessary to incent ITC to construct them, or to permit ITC to obtain the financing necessary to construct them. Finally, granting the Application would abruptly impose additional costs on New York ratepayers that had no notice that such costs would be imposed on them, and that had no input into whether, or how, such facilities should be constructed.

ii. AEP Complaint

The Commission reiterated these holdings in its rejection of a complaint by American Electric Power ("AEP") seeking the imposition of a postage stamp rate for existing facilities in both PJM and the Midwest ISO.[166] Similar to the arguments made by MISO and ITC in this case, AEP argued that its existing high-voltage transmission facilities in the combined

[166] *See American Electric Power Service Corp. v. Midwest Independent Transmission System Operator, Inc., et al.*, 122 FERC ¶ 61,083 ("*AEP II*"), *order on rehearing*, 125 FERC ¶ 61,341 (2008).

PJM/Midwest ISO region provided substantial benefits to customers outside of AEP's zones, and that those customers should therefore bear a portion of the costs of AEP's existing facilities.[167]

The Commission began its discussion by explaining why postage stamp rates are permissible for future facilities, but not for existing facilities. The Commission first contrasted the planning process that led to the construction of AEP's existing facilities with the process used to prospectively plan the construction of new facilities in PJM and the Midwest ISO. The Commission explained that, unlike the process that led to the construction of AEP's existing facilities, "Midwest ISO and PJM plan the construction of new facilities based on each RTO's independent planning process, which helps to ensure that new projects are necessary to meet the reliability and economic needs of each RTO's system as a whole."[168] Equally important, "[s]takeholders in each RTO can participate in the RTO's regional planning process and, thus, can be part of the discussion that leads to the decision to build new facilities in which they will share the cost."[169] By "contrast, decisions to build [AEP's] existing facilities were not made as part of any regional planning process."[170] As Section III.D of this initial brief demonstrates, the Original PAR and Replacement PARs were not planned in any joint planning process that included the NYISO or PJM regions.

The Commission also explained that "reallocating the cost of existing facilities would neither provide economic efficiencies nor promote the goal of increasing necessary transmission investment."[171]

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[167] *See AEP II* at P 31.

[168] *Id.* at P 96.

[169] *Id.*

[170] *Id.*

[171] *Id.*

The Commission next addressed AEP's arguments that its facilities were, in fact, planned on a regional basis that justified a postage stamp rate. AEP's arguments were similar to the argument that MISO and ITC have made that the MEN Study[172] somehow shows that the Original PAR and Replacement PARs were the product of regional planning.[173] In response to AEP's argument that it "in fact did coordinate the development of its [high-voltage] system with other utilities in the region," the Commission stated that "AEP has not shown that the level and type of coordination it says occurred in the development of its existing high-voltage facilities is comparable to the RTO regional planning processes currently in place."[174] The Commission noted that while "AEP's facilities were likely not planned in isolation, there is no evidence in the record to show that they were planned to address regional needs of either the Midwest ISO or PJM wholesale market, and therefore they are not comparable to each RTO's regional planning process."[175]

The Commission also addressed the general argument that customers throughout PJM and the MISO should pay for AEP's existing high voltage facilities because they all benefit from them. In particular, the Commission stated that "[w]e do not dispute that some of AEP's existing facilities provide benefits outside of their local zone, including for Midwest ISO customers."[176]

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[172] Ex. NYI-44.

[173] As NYISO witness Zachary Smith explained in Exhibit NYI-38 (at 20:2-21:14), and as discussed in Section III.D of this brief, the MEN Study referenced in the Joint Application was not a multi-regional planning study to determine whether the Original PAR and the Hydro One PARs were necessary, appropriately designed, or whether they were the best, most cost effective, or the most appropriate solution to construct. The MEN Study did not discuss or address the allocation of the costs of the Original PAR among the regions that participated in the study. The MEN study did not seek input from the New York Power Pool (predecessor to the NYISO) or PJM regarding whether or not the MI/ON PARs should be constructed. Instead, the MEN study was initiated "[i]n order to ensure continued reliable operation of the interconnected regional systems" following the proposed installation of the Original PAR. Ex. NYI-44 at 39.

[174] *Id.* at P 98.

[175] *Id.*

[176] *AEP II* at P 133.

However, the Commission concluded that, "consistent with the Commission's findings in Opinion No. 494, this fact by itself does not establish that the current license-plate rate design for existing facilities is unjust or unreasonable, nor does it provide justification for reallocating the cost of existing facilities throughout the combined Midwest ISO/PJM region."[177]

The testimony of MISO witness Chatterjee in Exhibit MSO-Tab D attempts to distinguish the facts of *AEP II* from the circumstances presented in this proceeding,[178] but fails to do so. First, Mr. Chatterjee claims that the *AEP II* holding does not apply because Replacement PARs were facilities not yet in service at the time the Joint Application was submitted, [179] suggesting that the Replacement PARs are not "existing facilities" under the Commission's cost allocation rules. In Section IV.A.2.b.i of this initial brief, the NYISO explains that the Commission's determination is based on the developing utility's reasonable cost allocation expectations at the time a transmission facility is planned and constructed, not whether the developing utility submitted a new and unexpected cost allocation proposal shortly before construction of the transmission facility was completed.

Second, Mr. Chatterjee claims that, while the AEP facilities were constructed mainly to benefit AEP's region, the Replacement PARs will address loop flows benefiting the combined control areas.[180] However, as discussed in Section III.B of this initial brief, the evidence shows that the Original PAR and Replacement PARs were built to serve the interests of Michigan and Ontario utilities and their electricity customers.

[177] *Id.*

[178] Ex. MSO-Tab D at 24:13-27:12.

[179] *Id.* at 25:13-26:3.

[180] *Id.* at 26:4-8.

Finally, in an attempt to direct attention away from MISO's and ITC's failure to jointly plan the Replacement PARs with the NYISO and PJM regions, Mr. Chatterjee asserts that while the Commission found no evidence to show that the facilities at issue in *AEP II* were planned to address regional needs of either the MISO or PJM wholesale markets and therefore the planning was not comparable to each RTO's regional planning process, there is ample evidence in the record of this proceeding to support the MI/ON PARs' ability to address Lake Erie loop flow.[181]

Mr. Chatterjee's testimony attempts to dance around the joint planning requirement because, as demonstrated in Section III.D of this initial brief, the Original PAR and Replacement PARs were not planned jointly with PJM and NYISO. Setting aside the NYISO's multiple responses to MISO's and ITC's "benefit" allegations, the MI/ON PARs' ability to reduce Lake Erie loop flow is not even pertinent under the *AEP II* holding. In *AEP II*, the Commission recognized that the transmission facilities that AEP was seeking to allocate to PJM and MISO customers provided benefits to those customers, but concluded, "consistent with the Commission's findings in Opinion No. 494, this fact by itself does not establish that the current license-plate rate design for existing facilities is unjust or unreasonable, nor does it provide justification for reallocating the cost of existing facilities throughout the combined Midwest ISO/PJM region."[182] The Commission's reasoning in *AEP II* should be followed in this proceeding.

In sum, *AEP II* states that the costs of the Replacement PARs, having been incurred pursuant to a license plate rate cost allocation methodology, should not later be reallocated to unsuspecting third parties under a postage stamp rate. The MISO reached a similar conclusion

[181] *Id.* at 26:9-27:12.

[182] *AEP II* at P 133.

when ITC asked MISO to agree to re-allocate the cost of the PARs to other MISO customers.[183] There is no reason for the Commission to reach a different conclusion with regard to the proposal to allocate a portion of the cost of the Replacement PARs outside the MISO region to the NYISO's customers.

b. The Commission's decisions limit postage stamp rates to prospective transmission facilities constructed pursuant to an organized regional planning process

Just as important as the Commission's repeated rejection of the application of postage stamp rates to existing facilities are the limited circumstances under which the Commission has permitted the use of postage stamp rates. The Commission's decisions establish two fundamental prerequisites for the applicability of postage stamp rates – that they be applied to facilities constructed *after* the relevant postage stamp methodology has been put into effect, and that they be constructed pursuant to a formal, system-wide planning methodology which takes into consideration the needs of the entire region, and which permits all affected stakeholders to participate meaningfully *before* they are allocated transmission upgrade costs.

i. Prospective Transmission Facilities

One of the core lessons of Opinion No. 494 is that cost allocation for existing transmission facilities is different from cost allocation for proposed/future transmission facilities. Among the reasons for this is the need to encourage efficient construction and siting of new transmission assets. The Commission observed that the "reallocation of costs for existing facilities will not affect a transmission owner's future decision about whether and where to build

[183] *See* Section IV.A of this initial brief; Ex. NYI-2 at 1.

new transmission facilities."[184] Rather, "it is the cost allocation method for new transmission facilities that influences the incentive to invest."[185]

Another significant reason for the distinction between existing and proposed facilities is the desire to avoid the inequitable result of unanticipated cost shifts to unsuspecting third party transmission customers. The Commission has consistently sought to avoid the imposition of additional costs on third parties that had no notice that such costs would be imposed on them, or input into whether, or how, such facilities should be constructed.[186] As discussed in Section III.D of this brief, this is exactly the situation in which the NYISO and its customers find themselves. Neither the Original PAR nor the Replacement PARs were jointly planned with NYISO and its customers.[187]

In Exhibit MSO-Tab D, MISO witness Chatterjee argues that the Replacement PARs were not yet in service at the time the Joint Application was submitted, suggesting that the Replacement PARs are not "existing facilities" because the instant proceeding was initiated before the Replacement PARs began operating.[188] However, the Commission's decisions requiring license plate cost allocation for transmission facilities are not limited to transmission facilities that have already been placed in service. In the case of the MISO's transmission facilities in particular, the Commission approved a cost allocation approach that excluded from the newer, system-wide cost allocation mechanism numerous transmission projects that had reached advanced stages in the planning process, but that had not yet been constructed.[189] The

[184] Opinion No. 494 at P 53.

[185] *Id.*

[186] *Id.* at P 84.

[187] Ex. NYT-10 at 1.

[188] Exhibit MSO-Tab D at 25:13-26:3.

[189] *Midwest Independent Transmission System Operator, Inc.*, 117 FERC ¶ 61,241 at P 96 (2006) ("*MISO*").

Commission rejected challenges to this determination from developers of these excluded projects, noting that they had "moved forward with those projects without any assurance that such projects would be candidates for regional cost-sharing."[190] The key issue is not whether the underlying transmission facility is already in service before a postage stamp cost allocation method takes effect. The key is whether the developer of a transmission facility moved forward in its effort to develop and construct that facility without any assurance that the project would be a candidate for (inter)regional cost-sharing.[191]

There was no postage stamp rate in place for allocating costs across the combined Midwest ISO-PJM-NYISO region in 1998,[192] when Detroit Edison assumed a contractual obligation to construct the Original PAR, or in 2007, when ITC assumed a contractual obligation to construct the Replacement PARs.[193] As noted above, ITC has admitted that it did not ask the NYISO to contribute to the cost of the Replacement PARs until after it had already begun its efforts to construct the Replacement PARs.[194]

As discussed in Section IV.D of this initial brief, the Replacement PARs were approved for construction in the MISO region's transmission planning process in MTEP06. The costs of the Replacement PARs did not qualify for region-wide cost sharing as a baseline reliability project.[195] Instead, the costs were allocated to ITC's customers under a license plate rate design: MISO's Attachment O rate for the ITC zone.[196] MISO treated the Replacement PARs as

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[190] *Id.*

[191] *Id.* at PP 86, 96.

[192] Ex. NYI-48.

[193] Ex. NYI-49.

[194] Ex. NYT-11 at 1.

[195] Tr. 305:19-23; Ex. PJM-9 at 1 (Table 1.4-3 to the MTEP06 report).

[196] Ex. NYI-51 at 19 (MTEP06 Appendix A at 19 (showing project ID 1308 as *not* having a "Y" (for "Yes") in the last two columns for cost-sharing and postage-stamp)).

existing facilities for purposes of the MTEP planning process and for purposes of cost allocation within MISO because the Replacement PARs are like for like replacements for the Original PAR.[197] MISO has repeatedly determined that, within the MISO region, the cost of the Replacement PARs should not be reallocated to customers outside the ITC transmission zone.[198]

ITC did not propose or seek to allocate the costs of the Replacement PARs to customers located outside the MISO region in 2006. ITC first suggested to the Commission that NYISO and its customers should share in the costs of the PARs in August 2009,[199] and did not approach NYISO about it until October or November of 2009.[200] There was no postage stamp rate in place for allocating costs across the combined MISO-PJM-NYISO region in 1998, when Detroit Edison assumed a contractual obligation to construct the Original PAR,[201] or in 2007, when ITC assumed a contractual obligation to construct the Replacement PARs.[202] ITC moved forward with the construction of the Original PAR and the Replacement PARs without any assurance that the Replacement PARs were candidates for multi-regional cost-sharing. The December 23, 2009 letter from ITC (included as Attachment E to the January 12, 2010 NYISO report on Broader Regional Markets) that asks for contributions from NYISO and others explicitly states in the first paragraph that ITC has already "installed new PARs."[203] In addition, as explained in Section IV.D of this initial brief, it would be unduly discriminatory, unduly preferential, unduly prejudicial, unjust and unreasonable to allow a license plate cost allocation method to be used to

[197] *See* Ex. PJM-11 (data response to NYISO/ITC 1-14).

[198] *See, e.g.*, Ex. NYT-2 at 4.

[199] *See* ITC's *Answer In Opposition to Request for Clarification*, Docket No. ER08-1281-000 at 3 (August 31, 2009).

[200] *See* Ex. S-4 at 13, 25-26.

[201] Ex. NYI-48.

[202] Ex. NYI-49.

[203] Ex. S-4 at 25.

allocate the cost of the Replacement PARs within the MISO region, while applying a postage stamp rate allocation method outside the MISO region for the same transmission facilities.

ii. System-Wide Planning Process

The Commission's second prerequisite to the adoption of a postage stamp rate is the use of "a formal, Commission-approved, regional planning process where the needs of the region are addressed and where all stakeholders are given an opportunity to participate."[204] In its orders on the AEP complaint, the Commission found that "an important factor in allowing certain new high-voltage facilities to be eligible for postage-stamp treatment is that those new facilities are planned on a regional basis by a central grid operator, who considers the reliability and economic interests of the RTO as a whole."[205]

This factor directly affected the outcome of AEP's complaint because AEP was unable to prove that its existing facilities were constructed pursuant to such a process. AEP's collaborations with its neighboring utilities were insufficient to carry AEP's burden of establishing that its existing facilities had been planned pursuant to the necessary regional planning process. The Commission concluded that "[a]lthough AEP's facilities were likely not planned in isolation, there is no evidence in the record to show that they were planned to address regional needs of either the Midwest ISO or PJM wholesale market, and therefore they are not comparable to each RTO's regional planning process."[206]

[204] *AEP II* at P 99. *See also* Opinion No. 494 at P 84 ("facilities that are eligible for postage-stamp treatment will be planned on a regional basis by a central grid operator, PJM, which considers the reliability and economic interests of PJM as a whole.").

[205] *AEP II* at P 99.

[206] *Id.* at P 98.

3. The Application Does Not Demonstrate That the Prerequisites to the Adoption of Regional Cost Sharing for the Replacement PARs are Satisfied

All of the circumstances that the Commission relied on in rejecting postage stamp rates for existing facilities in Opinion No. 494 and in the *AEP II* case are present in this proceeding, and none of the prerequisites to the application of a postage stamp rate have been satisfied.

a. The Replacement PARs are existing facilities for which the type of cost allocation sought in the Joint Application is not available

One of the criteria for regional cost sharing is that the regional cost sharing mechanism be in place *before* the underlying transmission assets are planned and constructed. In the 2006 *MISO* order, the Commission addressed MISO's proposed institution of its transmission expansion cost allocation policy that allocated and recovered costs associated with new transmission projects and system upgrades within the MISO region. One of the issues presented was whether certain projects were appropriately being excluded from cost sharing. In finding the MISO's proposed "Excluded Projects List" appropriate (such that a postage stamp rate would not apply to those projects), the Commission noted that the proponents of the excluded projects "moved forward with [their] projects without any assurance that such projects would be candidates for regional cost sharing."[207]

Thus, where there are existing facilities – that is, facilities that have undergone either extensive planning or construction, the costs of which are expected to be recovered under a license plate rate – the Commission prohibits a reallocation of such costs pursuant to a postage stamp rate. The reasons for this, again, are to promote efficient transmission development, and to prevent unfair cost shifts to unsuspecting third party customers.

[207] *MISO* at P 96.

ITC proposed and MISO approved the construction of the Replacement PARs in the MTEP06.[208] ITC signed a contract with Hydro One that obligated ITC to construct the Replacement PARs, at its own expense, in 2007.[209] The first of the two PARs was delivered in October 2008, and the second was delivered in the fall of 2009.[210] Both had been installed by December 2009.[211] ITC first suggested to the Commission in August 2009 that NYISO and its customers should share in the costs of the Replacement PARs.[212] ITC first asked the NYISO to pay directly in October or November 2009.[213] ITC's request that the NYISO contribute occurred after the completion of the MISO's planning process, after the construction of the Replacement PARs was essentially complete, and over two years after ITC assumed a contractual obligation to construct the Replacement PARs.[214]

As shown in Section IV.A.1.a.ii of this initial brief, the Replacement PARs are existing transmission facilities for which the type of broad cost allocation proposed by MISO and ITC is prohibited. Applicable Commission precedent requires that MISO's and ITC's proposal to allocate a portion of the cost of ITC's Replacement PARs to the NYISO's customers be rejected.

b. ITC constructed the Original PAR and the Replacement PARs in order to benefit its own ratepayers, and to satisfy the requirements of the Michigan retail access statute, and not to provide interregional benefits

As the Commission established in Opinion No. 494, broad cost allocation is not warranted in circumstances where "existing facilities represent sunk costs that were built

[208] Ex. NYI-50 at 11, 19, NYI-51 at 7.

[209] Ex. NYI-49 at 10, 12 (§§ 6.1.1 and 10.3).

[210] Ex. S-3 at 6.

[211] *See* Ex. S-4 at 25.

[212] *See* ITC's *Answer In Opposition to Request for Clarification*, Docket No. ER08-1281-000 at 3 (August 31, 2009).

[213] *See* Ex. S-4 at 25.

[214] The 2007 Facilities Agreement is Ex. NYI-49.

primarily by individual utilities to serve their own internal needs and were financed by those utilities."[215] It is for this reason that the Commission, in its rehearing order on the AEP complaint, held that "[w]ithin the context of RTOs, examining the original basis for making an investment is a reasonable component of a rate design analysis."[216]

As described in detail in Section III.B of this initial brief, a review of the "original basis" for both the Original and Replacement PARs shows that they were designed and constructed primarily for the benefit of Ontario and Detroit Edison/ITC customers. Accordingly, reallocation of the costs of these facilities to NYISO and PJM is inappropriate.

c. The Replacement PARs were not planned and constructed pursuant to the type of formalized planning process that is a prerequisite to the type of cost allocation proposed in the Joint Application

Under the Commission policy discussed above, the specific requirement is that there be a "formal, Commission-approved, regional planning process where the needs of the region are addressed and where all stakeholders are given an opportunity to participate."[217] Informal discussions or collaborations are not sufficient to satisfy this criterion.[218] Rather, a proponent of a broad cost allocation must demonstrate that a formalized, regional planning process was in place at the time that the underlying facilities were planned, that it considered the needs of the entire region, and that it permitted all affected stakeholders to have a say over whether and, if so, how the relevant facilities will be constructed.[219]

[215] Opinion No. 494 at P 50.

[216] 125 FERC ¶ 61,341 at P 41.

[217] *AEP II* at P 99.

[218] *Id.*

[219] *AEP II* at P 99.

The Commission carried this policy forward into Order No. 1000 when it adopted Cost Allocation Principle 4. Cost Allocation Principle 4 requires "The allocation method for the cost of an intraregional facility must allocate costs solely within that transmission planning region unless another entity outside the region or another transmission planning region voluntarily agrees to assume a portion of those costs."[220] One of the chief rationales for this principle was (as explained in Order No. 1000-A) that "[e]ntities outside of a region may not be capable of being full participants in each and every region's transmission planning process in which they could potentially be allocated transmission costs. Unilateral allocation of costs to them thus could undermine rather than promote the linking of cost allocation and transmission planning."[221]

As demonstrated in Section III.D of this initial brief, MISO and ITC have offered no evidence of the *existence* of a formalized, regional planning process that includes the MISO, NYISO and PJM regions, much less evidence that such a planning process was used to plan the Original or the Replacement PARs.

Just as AEP was unable to satisfy its burden of demonstrating that its existing facilities were planned and constructed pursuant to a formalized, region-wide planning process, the Joint Applicants have failed to demonstrate that the Replacement PARs were planned and constructed pursuant to a formalized, region-wide planning process. In light of these circumstances, there is no basis under applicable Commission orders for granting the cost allocation proposed by MISO and ITC in this proceeding.

d. The Application does not distinguish its Replacement PARs from other transmission facilities that provide extra-regional

[220] Order No. 1000, at P 657.

[221] Order No. 1000-A, at P 709.

benefits, the costs of which are recovered through license plate rates

The Application does not distinguish the Replacement PARs from other existing transmission facilities that provide benefits outside the region in which they are located, but whose costs are recovered through license plate rates.

It is not difficult to identify existing transmission facilities that provide benefits to neighboring regions. On pages 39 and 40 of Exhibit NYI-1, NYISO witness Yeomans identifies six transmission security benefits that interconnected transmission facilities, including free flowing transmission lines, provide to neighboring ISOs and RTOs. The benefits Mr. Yeomans identifies are: (1) reduced post contingency power flows; (2) improved pre- and post-contingency transmission voltage performance; (3) improved dynamic and steady state transmission stability performance; (4) improved post-disturbance frequency response; (5) opportunities for reserve sharing protocols; and (6) opportunities for emergency power purchases. As Mr. Yeomans explains, none of the mutual transmission security benefits he identifies require a PAR, are unique to a PAR-equipped interconnection, or are enhanced by the installation of a PAR.[222]

The NYISO submits that there is no basis for distinguishing the Replacement PARs from other existing transmission facilities that are capable of providing benefits outside the region in which the facilities are located. To avoid the endless litigation that permitting *ex post* cost allocation would create, Commission precedent only permits the cost of transmission facilities to be allocated regionally (or across multiple regions) on a prospective basis, and only when transmission facilities are planned and developed pursuant to a process that provides *all* of the entities to which costs will be allocated an opportunity to participate. The NYISO believes this

[222] Exhibit NYI-1 at 40:5-6.

approach is the correct approach, and it bars allocation of costs of the Replacement PARs to NYISO and its customers.

B. Acceptance of the Joint Application's Proposal to Charge NYISO and PJM Would Violate the Policies Expressed in Order Nos. 1000 and 1000-A

The Joint Application's attempt to allocate Replacement PARs costs to NYISO and PJM violates the policies expressed in Order Nos. 1000 and 1000-A. Regional Cost Allocation Principle 4 articulated in Order No. 1000 states:

> The allocation method for the cost of a transmission facility selected in a regional transmission plan must allocate costs solely within that transmission planning region unless another entity outside the region or another transmission planning region voluntarily agrees to assume a portion of those costs.[223]

Regional Cost Allocation Principle 4 is consistent with the cost-allocation principles included in the then-pending Notice of Proposed Rulemaking issued June 17, 2010, which formed the basis for the Commission's subsequent Order No. 1000:

> The allocation method for the cost of an intraregional facility must allocate costs solely within that transmission planning region unless another entity outside the region or another transmission planning region voluntarily agrees to assume a portion of those costs.[224]

Order No. 1000-A rejected rehearing requests (including a rehearing request filed by a group that included ITC) asking the Commission to allow transmission providers to accomplish exactly what the MISO/ITC Joint Application proposes: the ability to submit a filing "to allocate [unilaterally the] costs of a facility to a neighboring region that benefits from it." The Commission's ruling on these rehearing requests is set forth below:

> We affirm Regional and Interregional Cost Allocation Principle 4. Accordingly, we deny the arguments of those petitioners that ask us to expand the scope of Cost Allocation Principle 4 to permit a transmission planning region where a new

[223] Order No. 1000 at P 657.

[224] *Transmission Planning and Cost Allocation by Transmission Owners and Operating Public Utilities*, Notice of Proposed Rulemaking, 75 Fed. Reg. 37884, 37905 at P 164 (2010) ("Transmission NOPR").

> transmission facility is located to allocate costs of the facility unilaterally to a neighboring region that benefits from it. Such arguments fail to take into account the relationship between the Commission's cost allocation reforms and the other reforms contained in Order No. 1000 and the need to balance a number of factors to ensure that the reforms achieve the goal of improved planning and cost allocation for transmission in interstate commerce.[225]

The Commission explained in Order No. 1000-A that this approach "follows directly from the requirement of Order No. 890 that transmission planning be open and transparent," promoting " a close link between transmission planning and cost allocation and helps to ensure fairness, which ultimately promotes successful transmission planning."[226] The Commission warned in Order No. 1000-A that "[e]ntities outside of a region may not be capable of being full participants in each and every region's transmission planning process in which they could potentially be allocated transmission costs. Unilateral allocation of costs to them thus could undermine rather than promote the linking of cost allocation and transmission planning."[227]

Furthermore, Order Nos. 1000 and 1000-A acknowledged that, although the Commission's policy may allow some beneficiaries to avoid cost responsibility, it was "important to balance the possibility that some beneficiaries could escape cost responsibility against the larger goal of linking cost allocation with the transmission planning process for the purpose of improving that process."[228] Thus, even if the Commission were to determine that the NYISO receives *some* benefit from the Replacement PARs, Commission policy prohibits MISO/ITC from allocating any resulting costs to a neighboring region like the NYISO, without the NYISO's consent.

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[225] Order No. 1000-A at P 707.

[226] Order No. 1000-A at P 709.

[227] *Id.*

[228] *Id.* at P 710.

Regional Cost Allocation Principle 4, as articulated in Order No. 1000, aligns with prior Commission precedent such as its Opinion No. 494 and *AEP II* order, as discussed in detail in Section IV.A of this brief.

The Joint Application directly and unambiguously violates the policies expressed in Regional Cost Allocation Principle 4 described in Order No. 1000, and affirmed in Order 1000-A, by proposing to unilaterally allocate costs incurred for a transmission facility constructed in one transmission planning region's plan (*i.e.*, MISO) – and located in that region – to another planning region (*i.e.*, NYISO) without the consent of the NYISO or its customers. The Replacement PARs are located in the MISO. The MISO does not share a common border with the NYISO. The NYISO has not – in the words of Regional Cost Allocation Principle 4 – "voluntarily agree[d] to assume a portion of the costs" MISO and/or ITC have incurred for the ITC PARs. The Joint Application thus should be rejected because it is inconsistent with Commission policy.

C. The Joint Application Improperly Shifts Costs Caused by IESO and Its Customers to NYISO and PJM, Resulting in Undue Discrimination

Joint Applicants argue that it would be unjust and unreasonable to require one set of market participants to pay for costs that are caused by other market participants.[229] MISO and ITC claim that the goal of their cost allocation proposal is to make sure that "the cost burden" accurately reflects the cost causation principle "by fairly allocating the cost of the New PARs to the other regions that cause the loop flow issue."[230] MISO witness Chatterjee asserts that the Commission has stated "that a cost allocation where certain market participants are required to

[229] *See* Ex. MSO-Tab D at 29:9-16. MISO and ITC have not alleged or shown that NYISO or its customers are MISO market participants. Rather, they have admitted that the NYISO and its customers are not MISO customers. *See* Ex. NYI-5 at 1.

[230] Joint Application Transmittal Letter at 5.

pay for … costs caused by other market participants although both sets of market participants engage in activities that cause the additional costs, is unjust and unreasonable."[231] MISO witness Webb also asserts that "just and reasonable rates require that customers pay only those costs that are attributable to them,"[232] and reaches the conclusion in his adopted direct testimony that "a cost allocation methodology that allocates costs to one set of market participants, but exempts others engaged in the same cost causing behavior is unjust and unreasonable."[233]

The Joint Applicants proposed cost allocation method patently violates the principles that they espouse. MISO's DFAX analysis indicates that the IESO region's generation-to-load flows are the single largest contributing factor to Lake Erie loop flows, and that IESO's generation-to-load contribution causes more than half (55%) of all Lake Erie loop flow.[234] MISO witness Chatterjee recognized at hearing that IESO is "part of the cost causation…."[235] Nonetheless, MISO and ITC are not proposing to require IESO or its customers to bear any of the costs that the MISO's DFAX analysis indicates that the IESO region causes; to the contrary, MISO and ITC propose to required NYISO's and PJM's customers (as well as ITC customers) to pay for costs that are caused by IESO. The proposal to charge NYISO and PJM customers for costs that MISO has determined are caused by IESO and its customers is unjust, unreasonable and unduly discriminatory to the NYISO and its customers.

A Commission order addressing circumstances similar to those presented in this proceeding underscores that conclusion. In *Ameren Servs. Co. v. Midwest Indep. Transmission*

[231] Ex. MSO-Tab D at 29:9-16.

[232] Ex. MSO-Tab D at 31:20-32:1 *citing Ameren Services Company*, 125 FERC ¶ 61,161 at P 44 n.39 (2008) (citing *Enron Power Marketing, Inc.*, 119 FERC ¶ 63,013 at P 157 (2007) (citing *KN Energy, Inc.* v. *FERC*, 968 F.2d 1295,1300 (D.C. Cir. 1992).

[233] Ex. MSO-Tab D at 32:4-6.

[234] Ex. NYT-1, at 17:11-13; *see* Ex. MSO-1B, IESO_Gen, Total Participation.

[235] Tr. 343:2-4.

Sys. Operator, Inc.,[236] the Commission held that a public utility may not exclude from cost allocation a customer (or a class of customers) that caused the public utility to incur such costs in the first place. In *Ameren*, the Commission granted a complaint to require MISO to allocate Revenue Sufficiency Guarantee ("RSG") costs to virtual bidders because "the Commission concluded that virtual supply offers can cause RSG costs to increase."[237] The Commission affirmed on rehearing that failing to assess such costs to virtual bidders meant the rate MISO assessed other customers was unduly discriminatory.[238] Similarly, IESO contributes to the cost causation that created the need for the Replacement PARs. Rather than allocate to IESO the costs it caused, MISO allocates those costs to the NYISO and PJM—the very type of discrimination the Commission prohibited in *Ameren.*

The rationales offered by the Joint Applicants for charging NYISO and its customers for costs that they do not cause are that: (i) IESO is non-jurisdictional to the Commission (so an attempt by ITC and MISO to forcibly recover costs from Canadian customers that they have not agreed to pay is unlikely to succeed), and (ii) Hydro One customers paid the costs of the Hydro One PARs, so they should bear no obligation to pay any portion of the costs of the Replacement PARs. Both rationales should be rejected.

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[236] 121 FERC ¶ 61,205 (2007) (*"Ameren"*).

[237] *Id.* at P 81.

[238] *Ameren Servs. Co. v. Midwest Indep. Transmission Sys. Operator, Inc.*, 125 FERC ¶ 61,162 at P 24 (2008). The Commission explained:

We agree with the complainants that the critical issue is whether any virtual supply offer can cause Revenue Sufficiency Guarantee costs or whether only virtual supply offers of certain market participants can cause Revenue Sufficiency Guarantee costs – i.e., whether the existing rate is unduly discriminatory. In the Order on Revenue Sufficiency Guarantee Complaints, the Commission considered the evidence in the record of Docket No. ER04-691, as sponsored by complainants, to provide a sufficient basis to find that the existing rate is unduly discriminatory. Since the central claim in the Revenue Sufficiency Guarantee Complaints is undue discrimination, we do not consider a zone of reasonableness to be the correct metric for determining if the Revenue Sufficiency Guarantee charge is just and reasonable. We also do not find that a cost of service study would add guidance as to whether the current rate is unduly discriminatory. Accordingly, the assertion that virtual supply offers do not cause Revenue Sufficiency Guarantee costs does not persuade us to grant rehearing.

In 1998 and in 2007 ITC's predecessor Detroit Edison and ITC negotiated interconnection agreements with Hydro One's predecessor Ontario Hydro and Hydro One to construct the MI/ON PARs, including the Hydro One PARs, the Original PAR and the Replacement PARs. Detroit Edison's agreements with Ontario Hydro assigned cost responsibility for the Original PAR to Detroit Edison; ITC's agreement with Hydro One assigned cost responsibility for the Replacement PAR(s) to ITC.[239] The agreements assigned cost responsibility for the L51D and L4D PARs to Ontario Hydro/Hydro One.[240] Neither NYISO nor PJM, nor any of their customers, were invited to participate in the negotiation of the cost sharing agreements that ITC and Hydro One voluntarily entered into.

Because ITC voluntarily entered into a cost sharing agreement with Hydro One that addressed cost responsibility for the Replacement PARs in 2007, ITC's inability to recover a portion of the cost of the Replacement PARs from customers in the IESO control area is a problem that is properly assigned to ITC. Unless ITC is able to convince Hydro One or IESO to agree to pay for a portion of the cost of ITC's Replacement PARs, ITC should be required to absorb the costs that MISO's DFAX analysis indicates are caused by IESO and its customers, consistent with the contractual obligations that Detroit Edison and ITC voluntarily assumed. This is a risk that ITC took when it planned and began constructing the Replacement PARs without having planned them jointly and sought voluntary agreements with IESO/Hydro One and the other regions for cost support. MISO witness Chatterjee recognized at the hearing that ITC and Hydro One could have attempted to negotiate an agreement to have IESO share in the costs.[241]

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[239] *See* Ex. NYI-48 at 2 § 3.2 and NYI-49 at 12 § 10.3. *See also* Section III.B.1 of this initial brief.

[240] *Id*.

[241] Tr. 343:5-7.

With respect to the "crediting" argument, even assuming for purposes of argument that it has merit, the Joint Applicants provided no evidence, in MISO witness Webb's testimony or otherwise, to show the costs of the Hydro One PARs or their proportionality to the share of Replacement PARs costs that the DFAX method would assign to IESO's customers. At hearing, MISO witness Chatterjee specifically stated he had no knowledge regarding the amount of the revenue requirement or investment for the Hydro One PARs or how Hydro One's investment in the Hydro One PARs compares to ITC's revenue requirement for the Replacement PARs.[242]

Further, the "selectivity" of crediting IESO's customers for their contribution to the costs of the Hydro One PARs alone should be rejected as unduly preferential and unduly discriminatory. The Joint Applicants do not propose to give any credit to PJM and NYISO and their customers for building PARs on their systems that also help control Lake Erie loop flow. As demonstrated in the study performed by NYISO witness Smith that is described in Section V.E of this initial brief, the PARs at PJM/New York border and other PARs in the Eastern Interconnection tend to mitigate Lake Erie loop flows when they are being actively operated to better control power flows.[243] If the other PARs in the Eastern Interconnection were removed from service, Lake Erie loop flow would be substantially higher than it is today.[244] NYISO witness Yeomans explained in testimony that the Replacement PARs do not provide unique benefits that no other PARs can provide.[245]

In addition to denying NYISO and PJM a financial credit for the PARs they have constructed, the Joint Applicants refused to give NYISO and PJM a financial credit for the costs

[242] Tr. 345:24-346:8.

[243] Ex. NYI-38 at 21:20-25:10.

[244] *Id.*, at 25:4-10.

[245] Ex. NYI-1 at 40:10-18.

of designing and implementing the "Broader Regional Markets" initiatives[246] that are designed to control or mitigate the effects of loop flow.[247]

For these reasons, if any Replacement PARs costs at all are permitted to be assigned to NYISO, despite the myriad of reasons for which that should *not* occur, none of the costs that MISO's DFAX analysis indicates were caused by IESO should be reallocated to NYISO or its customers.

D. It Is Not Just and Reasonable, and Is Unduly Discriminatory, to Charge NYISO and its Customers for the Costs of the Replacement PARs When MISO Customers Outside the ITC Zone Are Not Being Charged

Joint Applicants argue that it would be unjust and unreasonable to require one set of market participants to pay for costs that are caused by other market participants.[248] MISO and ITC claim that the goal of their cost allocation proposal is to make sure that "the cost burden" accurately reflects the cost causation principle "by fairly allocating the cost of the New PARs to the other regions that … cause the loop flow issue."[249] MISO witness Chatterjee asserts that the Commission has stated "that a cost allocation where certain market participants are required to pay for … costs caused by other market participants although both sets of market participants engage in activities that cause the additional costs, is unjust and unreasonable."[250] MISO witness Chatterjee also asserts that "just and reasonable rates require that customers pay only those costs

[246] Tr. 351:22-352:1.

[247] Ex. NYI-46 at 15:3-18:22.

[248] *See* Ex. MSO-Tab D at 29:9-16. MISO and ITC have not alleged or shown that NYISO or its customers are MISO market participants. Rather, they have admitted that the NYISO and its customers are not MISO customers. *See* Ex. NYI-5 at 1.

[249] Joint Application Transmittal Letter at 5.

[250] Ex. MSO-Tab D at 29:9-16.

that are attributable to them,"[251] and reaches the conclusion in his adopted direct testimony that "a cost allocation methodology that allocates costs to one set of market participants, but exempts others engaged in the same cost causing behavior is unjust and unreasonable."[252]

Contrary to the Joint Applicants' cost causation and allocation theories, and the cost responsibility determined by MISO's DFAX study, the Joint Application does not propose to assign any share of the cost of ITC's Replacement PARs to MISO customers outside the ITC zone, despite the fact that MISO's DFAX study indicates that MISO areas and customers located outside ITC's region contribute to Lake Erie loop flows.[253] The Joint Applicants' proposal to exempt all MISO Transmission Owners and customers that do not pay ITC's zonal "Attachment O" rate from any responsibility for the cost of the MI/ON PARs, while at the same time asking NYISO and PJM customers to pay for a portion of the cost of the Replacement PARs, is unjust, unreasonable, unduly preferential, unduly prejudicial and unduly discriminatory.

In MTEP06, which incorporated the Replacement PARs into the MISO region's planning process as a MISO reliability project, the MISO Board of Directors did not identify the "B3N Interconnection" Replacement PAR project as a "Baseline Reliability Project" that was eligible for cost sharing within the Midwest ISO region. Rather, as confirmed by MISO witness Chatterjee,[254] the MISO Board determined that the cost of the Replacement PARs was not eligible for cost sharing and needed to be recovered from customers located in ITC's traditional

[251] Ex. MSO-Tab D at 31:20-32:1 *citing Ameren Services Company*, 125 FERC ¶ 61,161 at P 44 n.39 (2008) (citing *Enron Power Marketing, Inc.*, 119 FERC ¶ 63,013 at P 157 (2007) (citing *KN Energy, Inc.* v. *FERC*, 968 F.2d 1295,1300 (D.C. Cir. 1992).

[252] Ex. MSO-Tab D at 32:4-6.

[253] *See* Ex. MSO-1B identifying and calculating DFAX participation factors for 28 distinct MISO "Load Areas" (zones), only one of which (MISO_ITCT_Load) represents ITC's Load Area.

[254] Tr. 305:9-306:5.

service territory.[255] The Joint Application Transmittal Letter confirmed that the Joint Applicants do not propose to allocate the cost of the Replacement PARs to MISO customers located outside the ITC pricing zone.[256]

The DFAX study (appropriately) does not limit its study of generation-to-load flows occurring within MISO to those occurring within the ITC zone. Instead, the DFAX study includes and calculates participation factors for all MISO generation and loads, regardless of their location.[257] MISO witness Mallinger admits that the "rest of MISO benefit[s] from the replacement PARs."[258]

There is no cost-causation basis for exempting non-ITC MISO customers from cost responsibility for the Replacement PARs. The Joint Applicants argue that costs caused by the activities of one entity should not be paid by another. However, the Joint Applicants fail to apply the cost allocation principles they espouse. For the reasons explained above, the Joint Applicants' proposal to exempt MISO customers that do not pay the ITC zonal rate from any responsibility for the cost of the Replacement PARs, while at the same time charging customers in the NYISO and PJM for a portion of the cost of the Replacement PARs, is unjust, unreasonable, unduly preferential, unduly discriminatory, and should be rejected by the Commission.

[255] Ex. NYI-51 at 7, project 1308.

[256] Joint Application Transmittal Letter at 16.

[257] *See* Ex. MSO-1B identifying and calculating DFAX participation factors for 28 distinct MISO "Load Areas" (zones), only one of which (MISO_ITCT_Load) represents ITC's Load Area.

[258] Tr. 561:3-5.

E. The MISO-IESO Operating Instruction and MISO Tariff Provide Undue Operating Preferences to MISO, IESO and Their Customers

The MISO-IESO Operating Instruction[259] provides MISO and IESO nearly unlimited discretion to suspend normal operation of the MI/ON PARs to address reliability concerns or anomalous market results for the benefit of MISO and IESO customers; the same treatment is not available for reliability concerns or market anomalies that occur in the NYISO or PJM control areas. The Joint Application's proposal to impose equal charges on entities that are not eligible or expected to receive equal benefits from the operation of the MI/ON PARs is unduly preferential, unduly prejudicial and unduly discriminatory.

Proposed Attachment SS-1 to the MISO Tariff [260] would permit MISO to temporarily suspend normal operation of the MI/ON PARs "in the event there are anomalous Midwest ISO market results related to the PARs controlling the Michigan-Ontario Interface." Proposed Attachment SS-1 provides no such similar opportunity for the operation of the MI/ON PARs to be suspended should NYISO or PJM encounter anomalies in their own markets that are affected by, or related to the operation of the MI/ON PARs. Here again, the Joint Application's proposal to impose equal charges on entities that are not eligible or expected to receive equal benefits from the operation of the MI/ON PARs is unduly preferential, unduly prejudicial and unduly discriminatory.

These factors support the rejection of the Joint Application.

1. The Operating Instruction

The Operating Instruction is an agreement to which the NYISO is not a party. The Operating Instruction was drafted and executed by MISO and IESO to provide a framework for

[259] Ex. NYI-3 at 50-59.

[260] Ex. MSO-Tab H (last page).

their coordinated operation of the MI/ON PARs. For the reasons set forth below and in the testimony of NYISO witness Yeomans, the Operating Instruction reinforces MISO's ability to provide preferential treatment to MISO and IESO over the NYISO and PJM.[261]

First, neither the NYISO nor PJM has a direct say in how MISO will operate the Replacement PARs or in how MISO and IESO will operate the MI/ON PARs. Section 1.0 of the Operating Instruction states that MISO "will direct actions regarding the Michigan-Ontario interconnection facilities in Michigan," and that "MISO and IESO will jointly coordinate operation of the Interconnection Facilities in accordance with this document regardless of the location or the status at any time of any of the Interconnection Facilities."[262] Although the Operating Instruction requires MISO and IESO to consult with the NYISO and PJM in a limited number of circumstances, the ultimate decision-making authority rests with MISO and IESO in every case.[263]

Second, several provisions of the Operating Instruction require, or at least permit, MISO and IESO to operate the MI/ON PARs in a manner that favors themselves (and their own customers) over the NYISO and PJM. For instance, Section 3.4.2 of the Operating Instruction provides "[i]n order to prevent an emergency in MISO or Ontario, PARs may be adjusted such that the Interface Deviation exceeds the Control Band providing other actions are utilized first, time permitting." There is no reciprocal provision that permits NYISO or PJM to request MISO and IESO to operate the PARs to prevent emergencies in New York or PJM. Similarly, Section 3.5.1 of the Operating Instruction identifies steps MISO may take to address emergencies within MISO or Ontario:

[261] Ex. NYI-1 at 20-23.

[262] Ex. NYI-1 at 20:5-11; Ex. NYI-3 at 50.

[263] Ex. NYI-1 at 20:13-17.

> If the emergency is within MISO or Ontario, the PARs may be adjusted up to Max Tap utilizing emergency thermal limits as appropriate….. If emergencies are declared in both MISO and Ontario, tap positions for the PARs shall be set in the position(s) that best mitigates, or assists with the mitigation of, the overall scope of the emergencies in both areas and that achieves, to the extent practical, a fair sharing of relief requirements between the areas."

In contrast, a more restrictive set of rules in Section 3.5.2 of the Operating Instruction applies to operating the MI/ON PARS to address emergencies that occur in the NYISO or PJM territories, compared to the rules that apply to operating the MI/ON PARs to address emergencies in MISO or IESO. Section 3.5.2.1 of the Operating Instruction provides that, for an emergency outside of MISO and Ontario, the PARs may be operated to assist with the emergency only after, among other things, the non-MISO or Ontario parties (such as NYISO or PJM) have "taken all mitigating steps except voltage reduction and shedding of firm load" to address the problem." Section 3.5.1 does not impose the same mitigation obligation for emergencies within MISO or IESO. In addition, Section 3.5.2 of the Operating Instruction provides that, for emergencies outside of MISO or Ontario, "[t]he type of assistance shall be agreed upon and directed by MISO and the IESO."

The Operating Instruction also provides for MISO and IESO to suspend normal operation of the MI/ON PARs to protect MISO and/or IESO customers in the event of unexpected operational or market outcomes in their regions, but does not provide corresponding protection for NYISO or PJM customers in the event of unexpected operational or market outcomes in their regions. For instance, Section 4.0 of the Operating Instruction recognizes that "normal operation of the PARs may result in unforeseen operational or market outcomes within MISO or the IESO."[264] That section also states that: "Depending on the nature of the event, the most appropriate or only mitigating action may be to suspend normal operation of the PARs, i.e.

[264] Ex. NYI-3 at 54-55.

change the Interface Control Mode from Regulated Mode to Bypass Mode." "Bypass Mode" is defined in Section 2.0 as the state in which the PARs are physically bypassed or where in-service PARs are at or near neutral tap and MISO and IESO are not attempting to control flows to the Interface Schedule.[265] Section 4.0 of the Operating Instruction provides that if MISO and IESO agree to suspend normal operations, "[n]ormal operations of the PARs will remain suspended until mutual agreement [between MISO and IESO] is reached to restore them to Regulated Mode or regulatory action occurs and a subsequent resolution plan developed and implemented."[266] While that section states that suspension of normal PAR operation "[i]n the case of anomalous market outcomes in either jurisdiction [*i.e.*, MISO or IESO], will only occur after consultation with other affected markets," MISO and IESO retain the ultimate decision making authority.

The identified provisions of the MISO/IESO Operating Instruction grant an undue preference to MISO, IESO, and their customers.

2. Attachment SS-1

As explained by NYISO witness Yeomans,[267] proposed Attachment SS-1 to the MISO tariff[268] allows MISO to temporarily suspend normal operations of the MI/ON PARs in the event of anomalous MISO market results related to the MI/ON PARs. As confirmed by MISO witness Zwergel, Attachment SS-1 does not provide for similar potential suspension of the MI/ON PARs for anomalous market results related to the PARs in NYISO or PJM markets.[269]

[265] *Id.* at 51.

[266] *Id.* at 55.

[267] Ex. NYI-1 at 23:5-22.

[268] Ex. MSO-Tab H (last page).

[269] Tr. 202:8-13.

MISO witness Zwergel's claim that suspensions of MI/ON PARs operation in those circumstances would have a "very short" duration[270] belies the facts. First, as explained above, MISO has sole discretion to determine when to suspend normal operations under Attachment SS-1, and Attachment SS-1 places no limitations on how long a suspension of normal operations may last. Second, as Attachment SS-1 provides, MISO must "file a report with FERC describing the circumstances and changes required to resume normal operations of the PARs." It could take MISO weeks to identify the changes required to resume normal operations, then prepare a report describing such changes, and even longer for the Commission to then act on that report. As summed up by NYISO witness Yeomans at the hearing, that requirement to prepare a report prevents the event from being short-lived.[271]

Market anomalies are rarely resolved quickly. A good example is the NYISO's experience in addressing the Lake Erie loop flow issue. Although the circuitous scheduling problem began in January 2008, it took the NYISO until July 21, 2008 to study the issue, identify the problem, develop a solution, and file the market rule change with the Commission. It took well over a year for PJM and MISO to resolve their dispute regarding the market-to-market redispatch provisions of the JOA in Docket Nos. EL10-45, EL10-46, and EL10-60.[272] The process of identifying, analyzing, and fixing a market defect is often complex and time-consuming. It is not clear how or why Mr. Zwergel expects that suspension of MI/ON PAR operations to address market anomalies would have a very short duration.

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[270] Tr. 201:8-11.

[271] Tr. 833:4-8.

[272] *Midwest Independent Transmission System Operator, Inc. v. PJM Interconnection, L.L.C.*, Order Approving Contested Settlement, 135 FERC ¶ 61,243 (2011). This case involved three consolidated complaints (two by MISO against PJM, one by PJM against MISO), filed in March and April 2010. The parties filed a settlement agreement on January 4, 2011. On March 9, 2011, the Settlement Judge reported to the Commission that the Settlement was partially contested. The Commission issued an order approving the settlement on June 16, 2011, which made the settlement agreement effective that day.

Proposed Attachment SS-1 grants an undue preference to the MISO and its customers and should be rejected by the Commission.

3. Proposal to continue charging NYISO and PJM while MI/ON PAR operations are suspended

The tariff revisions that MISO submitted with the Joint Application, including proposed Attachment SS-1, require MISO to continue charging NYISO and PJM customers for the cost of the Replacement PARs, even when their operation has been suspended to address a market anomaly or reliability issue in the MISO or IESO markets.[273] This was confirmed by MISO witness Zwergel.[274] Thus, if MISO suspends the operation of the MI/ON PARs due to an anomaly or reliability issue occurring in the MISO's markets, the NYISO would continue to pay for the operation of the Replacement PARs until the MISO market anomaly or reliability issue is resolved without receiving any of the "benefits" that MISO and ITC claim the MI/ON PARs will provide. MISO's proposal to require the NYISO's customers to pay for the operation of PARs that are not in service is unjust and unreasonable and should be rejected by the Commission.

F. NYISO and PJM and Their Customers Were Not Given the Opportunity to Participate in Deciding Whether to Construct the PARs or Whether to Pursue Other Options In Relation to Lake Erie Loop Flow

As Sections III.B.2, III.D and IV.C of this initial brief explain, NYISO and PJM and their customers were not given the opportunity to participate in deciding whether the Replacement PARs were a cost-effective element in a plan to address Lake Erie loop flow, or in negotiating how the Replacement PARs should be designed, built or operated. This fundamental unfairness – having costs forced upon them without any input – dictates rejection of the Joint Application.

[273] *See* Ex. NYI-7, NYI-8, NYT-30, NYI-65.

[274] Tr. 201:1-5.

The lack of collaboration regarding the Replacement PARs contrasts vividly with the cooperation undertaken in connection with the "Broader Regional Markets" ("BRM") initiatives. As explained by NYISO witness Pike, the new BRM rules that the ISOs and RTOs are developing will tend to reduce Lake Erie unscheduled power flow or permit the ISOs and RTOs to mitigate the impacts on unscheduled Lake Erie power flows at a lower overall cost.[275]

V. WHETHER ANY ALLOCATION OF COSTS OF THE ITC PARS TO NYISO AND PJM AND THEIR CUSTOMERS (OR OTHERS) IS APPROPRIATE BASED ON COST CAUSATION/INCURRENCE AND/OR BENEFICIARY PAYS PRINCIPLES OR ON OTHER CONSIDERATIONS, AND IF SO, IS THE PROPOSED COST ALLOCATION ROUGHLY COMMENSURATE WITH (A) THE EXTENT TO WHICH NYISO AND PJM AND THEIR CUSTOMERS (OR MISO, IESO OR OTHERS) CAUSED ITC TO INCUR THE COSTS OF THE INSTALLATION AND OPERATION OF THE ITC PARS (AND, TO THE EXTENT RELEVANT, THE REASONS FOR WHICH DETROIT EDISON/ITC INCURRED COSTS FOR INSTALLATION OF THE ORIGINAL PAR); AND/OR (B) THE EXTENT TO WHICH NYISO AND PJM AND THEIR CUSTOMERS (OR MISO, IESO OR OTHERS) WILL BENEFIT FROM (OR BE HARMED BY) THE INSTALLATION AND OPERATION OF THE ITC PARS?

Any allocation of costs of the Replacement PARs to NYISO and its customers is inappropriate, for the following reasons:

- MISO has stated that asserted "benefits" should not dictate the cost allocation for the Replacement PARs;
- Even if benefits were deemed relevant for the cost allocation, MISO and ITC have not submitted evidence demonstrating the New York customers receive any benefit from the operation of the Replacement PARs;
- To the extent that benefits are relevant, control by the MI/ON PARs of counterclockwise loop flow does not benefit, and may harm NYISO and its customers;
- ITC and its customers obtain transactional and reliability benefits that have not been accounted for in the Joint Application, and that are not available to NYISO or PJM customers;
- The MI/ON PARs do not provide unique benefits justifying allocation of the costs of the Replacement PARs to NYISO and PJM; and

[275] Ex. NYI-46 at 15:3-18:22.

- The incurrence of the costs for the Replacement PARs was not "caused" by NYISO or its customers.

A. MISO Has Stated that the Replacement PARs Are a Reliability Project and, As Such, Must be Allocated Based On Cost Causation, Not Potential Benefits

MISO witness Chatterjee's rebuttal testimony states that, because the Joint Applicants view the Replacement PARs as a "reliability project," their cost allocation is not based on a "beneficiary pays" theory.[276] Mr. Chatterjee's testimony on cross-examination confirmed that the Joint Applicants' proposed cost allocation for the Replacement PARs is based on a DFAX study that uses a reliability planning approach, and appropriately so in his view.[277] He also states that they did not perform a study using production cost models, as that would measure benefits of the PARs, a totally different aspect of cost allocation, inconsistent with his view of the Replacement PARs as a reliability project.[278]

Because MISO witness Chatterjee states that the correct way to allocate costs for the Replacement PARs is based on cost causation through a DFAX study (due to its being a reliability project), all of the testimony and exhibits of MISO and ITC in this proceeding regarding alleged "benefits" accruing to NYISO and its customers are irrelevant in this proceeding, and should be disregarded.

B. Even if Benefits Were Deemed Relevant for the Cost Allocation, MISO and ITC Have Not Submitted Evidence Demonstrating that New York Customers Receive Any Benefit from the Operation of the Replacement PARs

As discussed in Section V.A of this initial brief, MISO witness Chatterjee has stated that the cost allocation for the Replacement PARs should be based on reliability considerations (as calculated under a DFAX analysis) rather than a "beneficiary pays" approach. Accordingly,

[276] *See* Ex. MSO-1 at 19:10-12.

[277] Tr. 408:24-409:2.

[278] Tr. 409:8-17.

testimony and exhibits regarding alleged benefits to NYISO and its customers should be disregarded.

However, if benefits are determined to be relevant based on MISO's and ITC's references to Commission statements that allocated costs need to be commensurate with benefits,[279] MISO and ITC have not performed or submitted studies that quantify the expected benefits to NYISO and its customers from the operation of the Replacement PARs. Accordingly, the Joint Applicants have not met their burden, and the Joint Application should be dismissed.

MISO witness Chatterjee admitted that MISO did not perform a study of the "benefits" of the Replacement PARs to NYISO or PJM.[280] ITC similarly admitted that ITC did not create any documents relating to the economic and reliability benefits of the Replacement PARs.[281] Both MISO[282] and ITC[283] stated that they had not performed an assessment or studies to identify specific reliability criteria that are potentially violated by Lake Erie loop flow.

Instead of submitting actual studies or even a rough attempt to quantify benefits to each of the Lake Erie control areas for cost allocation purposes, MISO and ITC rely entirely on conclusory statements such as MISO witness Mallinger's observation that "[r]educing unscheduled flows will benefit the ITC System and all other systems around Lake Erie, including the NYISO and PJM systems"[284], or on statements by NYISO indicating support for the construction of the Replacement PARs.[285] Those NYISO statements were premised on untested

[279] *See, e.g.,* Joint Application Transmittal Letter at pp. 5, 7.

[280] Tr. 409:8-17.

[281] Ex. NYT-44.

[282] Ex. PTO-4 at 2.

[283] Ex. PTO-5.

[284] Ex. MSO-3 at 14:21-23.

[285] *See, e.g.,* Joint Application Transmittal Letter at 5-6 ("the NYISO continues to support the implementation of the New PARs").

MISO and ITC claims regarding the capabilities of the MI/ON PARs. For example, the draft "Broader Regional Markets, Long-Term Solutions to Lake Erie Loop Flow White Paper"[286] that accompanied the NYISO's January 12, 2010 filing in Docket No. ER08-1281-004 states that the MI/ON PARs are "*expected* to be capable of controlling Lake Erie Circulation by up to approximately 600 MW in either direction."[287] However, as explained in Section IX.A of this initial brief, MISO and ITC failed to provide with their filing or rebuttal testimony or at hearing any evidence that the operation of the MI/ON PARs will provide the claimed loop flow control. Further, Section IX.B explains that data provided by MISO in discovery shows that the MI/ON PARs in fact are failing to provide that claimed control.

In sum, to the extent that the Joint Applicants espouse the principle that cost allocation must be shown to be commensurate with benefits, MISO and ITC have failed to make that showing.

C. To the Extent that Benefits are Relevant, Control by the MI/ON PARs of Counterclockwise Loop Flow Does Not Benefit, and May Harm, NYISO and Its Customers

NYISO witness Pike's testimony identifies the limited circumstances in which effective, coordinated operation of *all* of the MI/ON PARs *may* benefit New York.[288] New York could benefit when: (a) the MI/ON PARs are operated to reduce clockwise loop flows, and (b) components of the New York State Transmission System ("NYSTS") that are substantially

[286] Ex. ITC-26.

[287] *Id.* at 9 (page 8 of White Paper) (emphasis added).

[288] Ex. NYI-46 at 21:18-23:19 (in addition to the potential benefit from the coordinated operation of all of the MI/ON PARs discussed in this section of the initial brief, New York may also benefit if the MI/ON PARs are successfully operated to better conform actual power flows to scheduled power flows and the PARs operation consistently reduces the observed magnitude and volatility of loop flows around Lake Erie.); *but see* NYI-66 (according to MISO's data Lake Erie loop flow has not become more predictable since MISO and IESO began actively operating the MI/ON PARs on April 5, 2012. Lake Erie loop flow was outside the +/-200 MW bandwidth more than 44% of the time between April 5, 2012 and July 18, 2012 and the average of the absolute value of the Lake Erie loop flow was outside the +/-200 MW bandwidth, 214 MW, for the time period.).

affected by unscheduled Lake Erie power flows are constrained.[289] On the other hand, New York may be "harmed" by the operation of the MI/ON PARs when (x) the MI/ON PARs are operated to reduce counterclockwise loop flows, and (y) components of the NYSTS that are substantially affected by unscheduled Lake Erie power flows are constrained, or would become constrained in the absence of counter-clockwise Lake Erie loop flow.[290]

As the data MISO provided in Exhibit NYI-66 indicates, Lake Erie loop flow has predominantly flowed in a counter-clockwise direction in 2012.[291] Counterclockwise Lake Erie loop flow tends to relieve transmission congestion in New York.[292] The data MISO provided in Exhibit NYI-66 shows that, in 2012, the MI/ON PARs have operated to block counterclockwise Lake Erie loop flow.[293] As explained above, the operation of the MI/ON PARs to block counterclockwise Lake Erie loop flow harms New York when components of the NYSTS that are substantially affected by unscheduled Lake Erie power flows are constrained, or would become constrained in the absence of counterclockwise Lake Erie loop flow.[294]

MISO's DFAX analysis projects that generator-to-load contributions to Lake Erie loop flows will continue to tend to be counterclockwise into the mid-term future.[295] In all three of the DFAX cases, peak, shoulder peak, and light load, the projected generator-to-load contributions are counterclockwise in direction.[296] Contributions are projected to be significantly

[289] Ex. NYI-46 at 22:8-13.

[290] Ex. NYI-46 at 22:13-16.

[291] *See* NYI-66 (the average Lake Erie loop flow between April 5, 2012 and July 18, 2012 was 48 MW counterclockwise); Tr. 1039:13-14 (Mr. Pike states, "In 2012, the average loop flow has been counterclockwise").

[292] Tr. 996:4-14.

[293] *See* NYI-66 (the average Lake Erie loop flow between April 5, 2012 and July 18, 2012 would have been 85 MW counterclockwise if the MI/ON PARs had not been in service).

[294] Ex. NYI-46 at 22:13-16.

[295] *See* Ex. MSO-1B.

[296] *See* Ex. MSO-1B.

counterclockwise in the peak and shoulder peak cases.[297] The net contributions of the four participating ISO/RTO regions (MISO, NYISO, PJM, IESO) result in an overall counterclockwise participation on the MI/ON Interface. Therefore, it is reasonable to expect that, on average, the MI/ON PARs will continue to be operated to reduce the magnitude of counterclockwise Lake Erie loop flow in the mid-term future. NYISO does not expect to benefit from the operation of the MI/ON PARs to mitigate or reduce counter-clockwise Lake Erie loop flow.

D. ITC and Its Customers Obtain Transactional and Reliability Benefits That Have Not Been Accounted For in the Joint Application, and That Are Not Available to NYISO or PJM Customers

ITC and its customers obtain benefits from the Replacement PARs that have not been accounted for in the Joint Application, and that are not available to NYISO or PJM customers. These benefits are transactional/economic and reliability-related. It would be unjust and unreasonable, and unduly discriminatory, to allocate the costs of the Replacement PARs based on the ability of the MI/ON PARs to reduce Lake Erie loop flow, while ignoring reliability benefits and other benefits that only ITC and MISO are expected to receive from the MI/ON PARs operation. For this reason, the Joint Applicants' proposed cost allocation should be rejected.

1. Transactional Benefits

As demonstrated in Section III.B.2 of this initial brief, the Original PAR and Replacement PARs were built to serve the transactional and economic interests of Michigan and Ontario utilities and their electricity customers. Exhibit NYI-56 identifies the potential for enhanced import capability into Michigan, from both the North (over the MI/ON Interface) and

[297] *See* Ex. MSO-1B.

into Michigan from the South. These benefits to ITC customers have not been accounted for in the proposed cost allocation, and do not accrue to NYISO or PJM customers.

2. Reliability Benefits

As demonstrated below, ITC recognized a wide array of benefits for its own and the MISO system (in addition to the transactional and economic benefits detailed in Section III.B.2), and these benefits were neither available to NYISO or PJM customers nor accounted for in the cost allocation proposed in the Joint Application.

The reliability benefits to the ITC service territory are well-documented. For example, MISO's analysis from 2005 states:

> Based on review of studies performed by ITC, and contingency review performed by the Midwest ISO, we conclude that the B3N circuit is beneficial to reliability to the ITC system…. In addition to the steady state overload conditions found, the B3N circuit contributes to import capability for the ITC system. In the Midwest ISO expansion planning study, MTEP 05, the Midwest ISO found that the ITC system may not have sufficient import capability by 2009 to meet typical loss of load expectation guidelines even with the B3N circuit in service. Clearly a decision not to restore the B3N circuit would tend to aggravate the ITC system resource reliability situation…. Midwest ISO believes that the number of problematic conditions possible for which restoration of the B3N circuit would provide enhanced operator flexibility and control argue for the need to restore this circuit to operational status.[298]

A 2006 e-mail from MISO witness Chatterjee to ITC witness Capra, among others, states that:

> B3N Project: A study had been performed by ITC and reviewed by Midwest ISO last year *to study the impact of not replacing the failed phase shifter. It was concluded that the phase shifter was beneficial to reliability of the ITC system.* I manually tested one of the contingencies in the report using the latest model with reduced load forecast model and found the overload level to be pretty close to the one in the report.[299]

[298] Ex. PJM-15 at 4.

[299] Ex. NYI-60 at 2 (emphasis added).

In addition, the MTEP06 report in which the Replacement PARs project was approved by MISO includes a substantial list of reliability benefits to the ITC system provided by the Replacement PARs and the restoration of the B3N circuit:

> *The new phase shifting transformers will increase both MVA capability* and phase angle control. Midwest ISO reviewed the impact on system performance of system operation with and without the B3N tie between ITC and IMO in service. The review was based both on review of the recent 2010 study reported to ECAR by ITC, and on independent review of contingent conditions. There a substantial number of contingencies involving multiple elements that can result in significant system overloads without the B3N circuit, which would not occur with the B3N circuit available. Contingencies that have the most significant impact are shown in the table below:
>
> • 116% for St Clair - Cypress 120 kV & St Clair – Bunce Creek 120 kV DCT
>
> • 112% for Jewell-Spokane 345-230-120 kV & Apache-Troy 120 kV
>
> • 102% for Jewell-Spokane 345-230-120 kV & Dean (all)
>
> • 101% for Caniff-Northeast 120 kV & Conners Creek (all)
>
> • 130% for Greenwood 120-345 kV & Atlanta-Tuscola 120 kV
>
> • 104% for Pontiac 345-120 kV #303 & Pontiac-Sunbird 120 kV
>
> • 115% for Both St.Clair-Lambton lines
>
> Following Phase 2 analysis, there were 129 outstanding violations, 7 of which were category B violations. Proposed projects were modeled to relieve the thermal overloads on ITC system. Subsequent analysis in MTEP06 demonstrated the project's effectiveness in addressing the system needs. Midwest ISO recommends the proposed projects become planned projects.[300]

On cross-examination, MISO witness Chatterjee discussed the MTEP06 report and explained that the contingencies listed above, which were resolved by the B3N project, were the source of reliability issues on the ITC system:

> **Q** Am I correct that MISO would have authorized ITC to help install the new PARs regardless of the fixing of these contingencies on MTEP 06?

[300] Ex. NYI-50 at 19.

A I do not believe that is correct. MISO's independent review showed that there are reliability needs and that was the basis for moving forward with these PARs.

Q The reliability needs from these contingencies was the reason for moving forward with these PARs?

A Yes.

Q You would not have authorized the PARs if it wasn't fixing this reliability?

A I do not see why you'd need to replace a facility if it wasn't really identified as needed from any circumstances. *This was one of the circumstances where we identified a basic threshold of reliability needs driving the need for that PAR.*[301] [Emphasis added.]

Mr. Chatterjee went on to say that, if the seven needs identified in the bullets in MTEP 06 did not exist, MISO would see no need for the Replacement PARs.[302]

It would be unjust, unreasonable, and unduly discriminatory, to allocate the costs of the Replacement PARs in a manner that accounts for expected Lake Erie loop flow reduction, but ignores transactional and reliability benefits that only ITC, MISO and their customers will receive from the operation of the MI/ON PARs. For this reason, the Joint Applicants' proposed cost allocation should be rejected.

E. The MI/ON PARs Do Not Provide Unique Benefits Justifying Allocation of the Costs of the Replacement PARs to NYISO and PJM

The MI/ON PARs do not provide unique benefits that no other PARs in the Eastern Interconnection provide. PARs and other controllable devices are frequently used to regulate A/C power flows. For example, the "JK PARs" at the New York/PJM border are operated to facilitate the flow of 1000 MW of power from Rockland County, New York to Bergen County, New Jersey. At the same time, the "ABC PARs," located at Farragut (in Manhattan) and Goethals (on Staten Island), are operated to bring 1000 MW of power from northern New Jersey

[301] Tr. 354:4-19 (corrected).

[302] Tr. 355:8-11.

into New York City. The result is a controlled "wheel" of 1000 MW of power across PJM's transmission system in northern New Jersey.[303] Because both sets of PARs (the ABC PARs and the JK PARs) are being operated to achieve a predetermined schedule, their operation to effectuate the 1000 MW wheel naturally tends to reject other, unscheduled, power flows across the transmission lines they regulate, and to reduce loop flow across those facilities.[304]

The Ramapo PARs at the PJM/ New York border perform a similar function. The NYISO and PJM have contractually agreed that the Ramapo (or "5018") transmission lines should carry a significant portion of the net interchange (imports/exports) that are scheduled between NYISO and PJM.[305] To implement this agreement, NYISO and PJM transmission owners jointly constructed a pair of PARs on the 5018 transmission lines. The Ramapo PARs are ordinarily operated to ensure that a significant portion of PJM/NYISO scheduled net interchange flows over the 5018 transmission lines. To the extent the Ramapo PARs' operation better conform actual flows on the 5018 transmission lines to scheduled flows on those transmission lines (even if the Ramapo PARs do not perfectly conform actual flows to scheduled flows), the Ramapo PARs reduce unscheduled flows over the 5018 transmission lines. Starting in January of 2013, as part of their new Market-to-Market Coordination effort, NYISO or PJM will be subject to a precisely calculated set of financial obligations that will apply whenever the Ramapo PARs are off-schedule and there is congestion on a Market-to-Market flowgate. The new Market-to-Market Coordination rules are expected to result in a better concerted effort by

[303] *See* Ex. S-5 at 14-16; Ex. MSO-3 at 16, n. 14. Consolidated Edison Company of New York ("ConEd") has the right to schedule 1000 MW to be wheeled across PJM's transmission system, but can elect to schedule less than 1000 MW of power. NYISO and PJM operate the ABC and JK PARs to effectuate ConEd's election.

[304] See Ex. NYI-1 at 40:15-18.

[305] *See* Ex. S-5 at 16-17.

NYISO and PJM to operate the Ramapo PARs to ensure that the Ramapo transmission lines carry their target schedule.

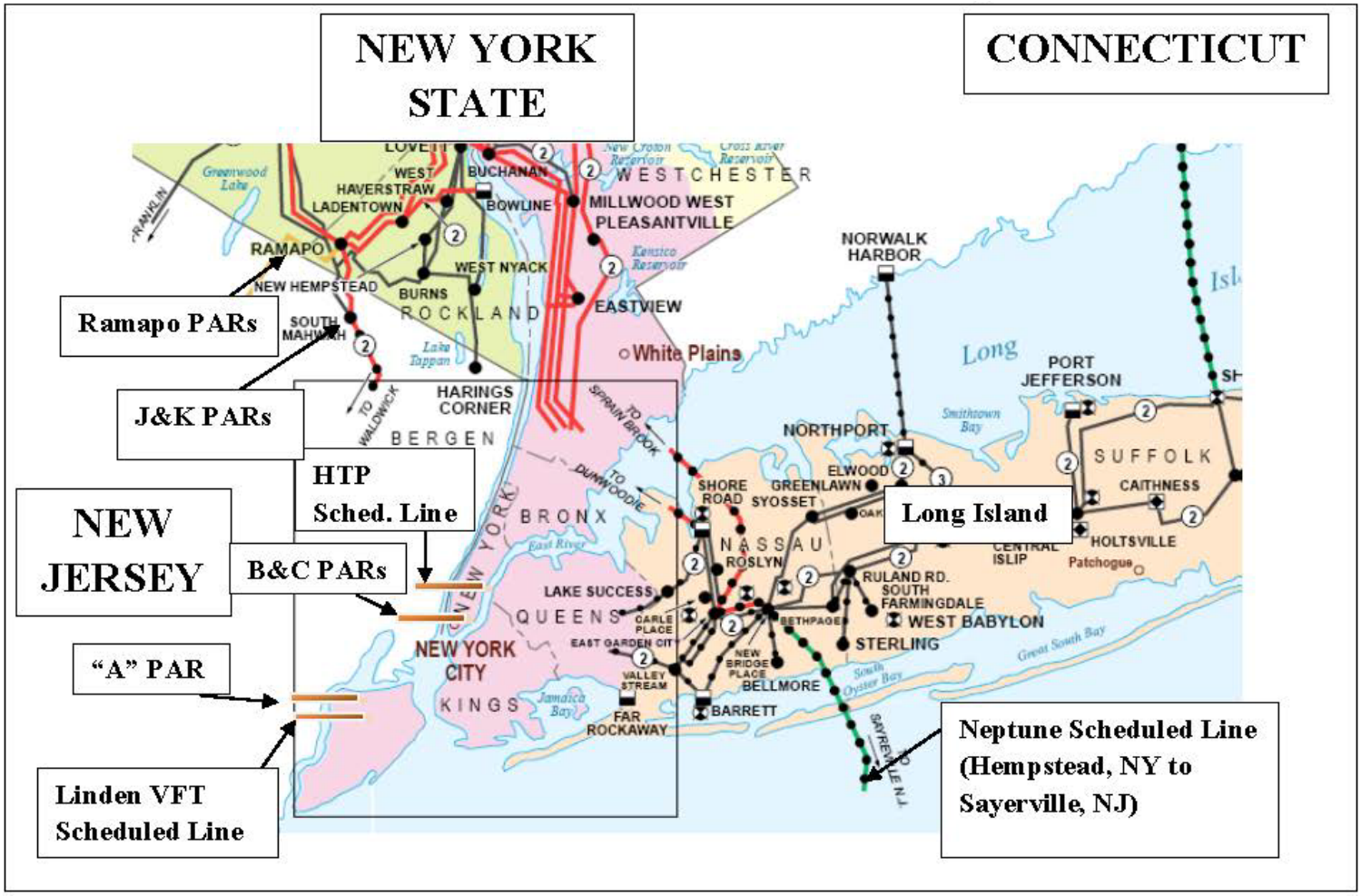
In addition to PAR-controlled transmission lines, there are several transmission lines interconnecting Northern New Jersey (PJM) to New York City and Long Island that are operated using even more precise control technologies. The Neptune transmission line interconnects Long Island, New York to Sayreville, New Jersey. It is a direct current ("DC") converter transmission facility. The amount of power that is converted from alternating current to direct current, then back to alternating current on the other side of the transmission line, can be controlled with great precision.[306] DC control technologies are far more precise than PAR controls which operate based on tap movements that each represent a 30MW to 75MW change in power flow. The Hudson Transmission Partners ("HTP") transmission line that will enter service in 2013 will link Ridgefield, New Jersey to Manhattan. HTP will also employ DC converter control technology and is expected to deliver actual flow that is nearly identical to the power flow scheduled over the direct current line. The Linden VFT scheduled line, that links Linden, New Jersey to Staten Island, New York, uses a different, extremely precise, control technology that is referred to as a "variable frequency transformer." Linden VFT's variable frequency transformer operates to a schedule that is an order of magnitude more precise than any PAR controlled facility is capable of achieving. Linden VFT's variable frequency transformer precisely conforms power flows over the line to the scheduled MWs.

As NYISO witness Zach Smith explained in Exhibit NYI-38 at 24, lines 5-9, "Other regions are shielded from NYISO unscheduled power flows (and the NYISO is shielded from their unscheduled power flows) by a string of PARs, Direct Current transmission lines, and a

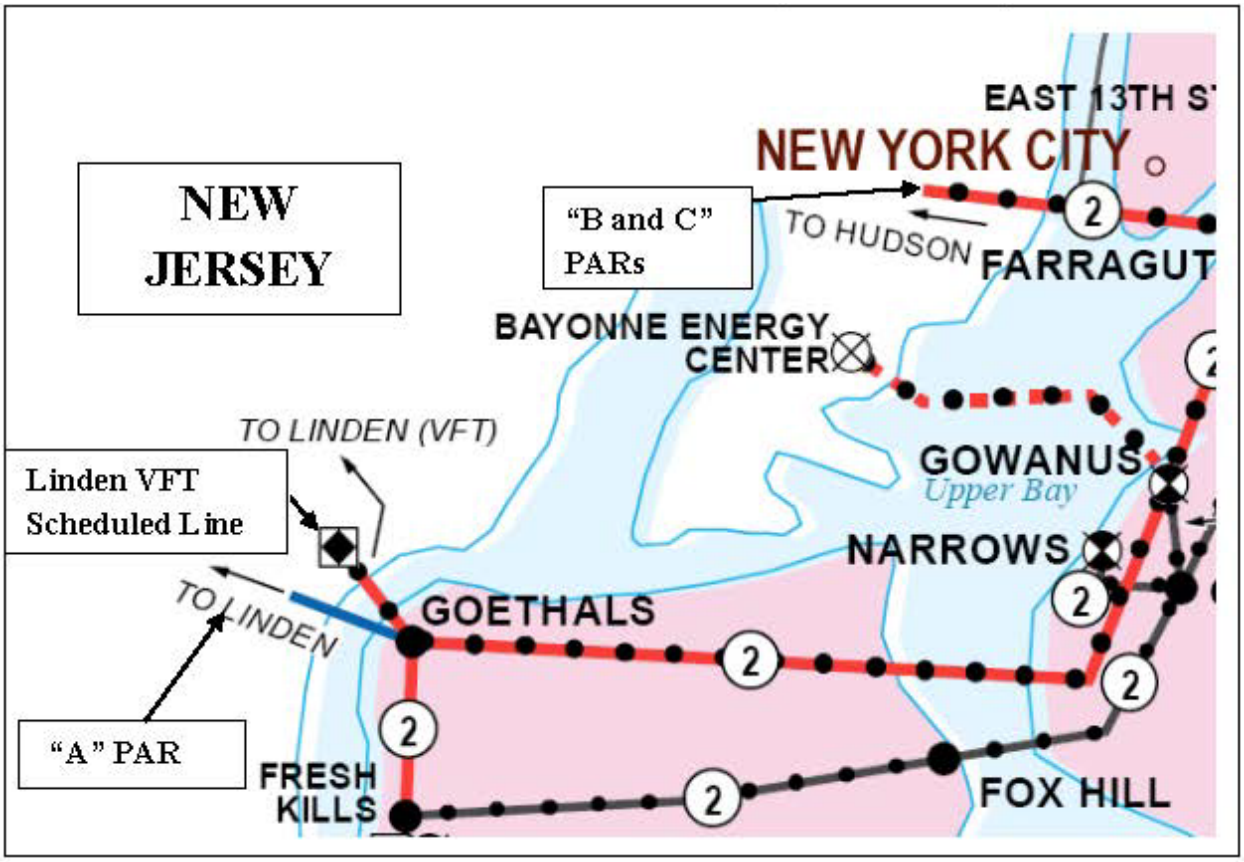
[306] *See* Ex. S-5 at 8.

Variable Frequency Transformer controlled transmission line, that are all located on the eastern portion of the NYISO/PJM border, between the load centers of New York City and Northern New Jersey." The maps set forth below illustrate Mr. Smith's statement that a series of controlled transmission lines form a "shield" between Northern New Jersey and New York City.

Controllable Devices on the New York – New Jersey Border



Controllable Devices on the New York City – New Jersey Border



The maps above show that *every* major (230 kV or above) transmission line linking northern New Jersey to New York City or Long Island is managed using a PAR, DC converter, or variable frequency transformer. Neither MISO, nor ITC, have been asked to contribute to the cost of any of the power control devices that are in place at the NYISO/PJM border. Most of the facilities identified on the maps have been in service, reducing loop flows, for years. Some of the PARs have been in-service for decades.

While the MI/ON PARs may reduce the magnitude of Lake Erie loop flow when all five of the MI/ON PARs are in-service and they are effectively operated to conform flow to schedule at the MI/ON Interface, the effective operation of other PARs, DC converters and variable frequency transformers to conform actual power flows to scheduled power flows also reduces

loop flows. Other PARs in the Eastern Interconnection affect Lake Erie loop flow, including PARs located within New York and in New Jersey at the NYISO/PJM border, PARs located in Ontario at the NYISO/IESO border and PARs located in New York City.[307] Use of more precise controllable devices, including DC converters and variable frequency transformers, also help conform actual power flows to scheduled power flows and reduces loop flow.

MISO's DFAX analysis assumes that all of the PARs in the Eastern Interconnection *except* the MI/ON PARs are in an "active" state[308] while measuring the expected power flows across the MI/ON Interface. The MISO's DFAX analysis assumes that, when activated, the MI/ON PARs will eliminate all loop flow across the MI/ON Interface.[309]

In order to estimate the loop flow control benefits that other PARs in the Eastern Interconnection provide, NYISO witness Zach Smith re-ran MISO's DFAX analysis with one significant modification. Mr. Smith set *all* PARs in the Eastern Interconnection to not control power flows ("inactive") before performing the analysis, then measured the change in expected flows across the MI/ON Interface. Changing the operating status of the PARs in the Eastern Interconnection from "active" to "inactive" was the *only* change Mr. Smith made to the MISO's study. The DFAX analysis otherwise remained exactly the same as the MISO's DFAX study. The NYISO's modified DFAX analysis shows, with the same level of certainty as the MISO DFAX analysis provides, that significantly higher unscheduled Lake Erie power flows occur at the MI/ON Interface when all of the PARs in the Eastern Interconnection that are *NOT* located at the MI/ON Interface are deactivated.

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[307] *See* Ex. NYI-38 at 7:10-12 and n. 1.

[308] See Ex. NYI-38 at 22:8-19 (A PAR is "active" when it is modeled as controlling power flows. A PAR is "inactive" when it is modeled as not controlling power flows.).

[309] *See* Ex. MSO-Tab D at 9:17-20 ("By comparison, the contributions from each region's generation to load transfer is shown to be zero for each region when the [MI/ON] interface PARs are controlling, since the control provided by these PARs overrides flow participation impacts on the interface combined flow.").

The results produced by the NYISO's modified DFAX analysis are set forth in the table below. The table provides (1) the weighted participation on the MI/ON Interface for each region from the MISO's original DFAX analysis (Exhibit MSO-1-a), which set all PARs *EXCEPT* the five MI/ON PARs to be "active," (2) the weighted participation on the MI/ON Interface for each region based on the NYISO's modified DFAX analysis with *ALL* PARs in the Eastern Interconnection set to be "inactive," and (3) the impact (including both the change in participation factor and the % change) that deactivating the other PARs in the Eastern Interconnection has on expected loop flow at the MI/ON Interface.

RTO	Weighted Participation on the MI/ON Interface as Presented in MISO's DFAX Analysis	Weighted Participation on the MI/ON Interface with All Eastern Interconnection PARs Modeled as Inactive as Re-Run by NYISO	Change in Participation on the MI/ON Interface with All Eastern Interconnection PARs Modeled as Inactive (increase + or decrease -)	Percentage Change in Participation on the MI/ON Interface with All Eastern Interconnection PARs Modeled as Inactive
MISO	190.59	307.20	**+116.61**	**+61.2%**
PJM	96.82	182.89	**+86.07**	**+88.9%**
NYISO	118.64	235.75	**+117.11**	**+98.7%**
IESO	504.48	490.43	**-14.05**	**-2.8%**
Total Participation on the MI/ON Interface	**910.53**	**1216.27**	**+305.74**	**+33.6%**

The NYISO's modified DFAX analysis shows significantly higher expected unscheduled Lake Erie power flow contribution at the MI/ON Interface when all of the PARs in the Eastern Interconnection are deactivated. MISO's participation at the MI/ON Interface increased by more than sixty percent, and PJM and NYISO's participation nearly doubled. Overall, unscheduled

power flows increase by approximately 33.6 percent.[310] As Mr. Smith explained in Exhibit NYI-38 at 24, lines 2-20, the results set forth in the table above are not surprising. The PARs at the New York/PJM border shield other regions from potential unscheduled power flows, especially from loop flows that might otherwise occur in order to serve New York's largest load centers– New York City and Long Island.

The results of the NYISO's modified DFAX analysis show that the PARs that NYISO and PJM constructed at their common border shield MISO, IESO and other Balancing Authority Areas from unscheduled power flows associated with serving New York and PJM load. The very same sets of PARs that shield the MI/ON Interface from power flows associated with serving New York City and Long Island load likely reduce PJM's measured flows over the MI/ON Interface as well.[311] The loop flow reduction benefits that the PARs located in New York and PJM provide are the same benefits MISO claims its MI/ON PARs will provide to New York and PJM customers.[312] All PARs in the Eastern Interconnection tend to mitigate Lake Erie loop flows when they are being actively operated to better control power flows. The MI/ON PARs are not unique in this regard.[313] If the other PARs in the Eastern Interconnection were removed from service, the NYISO's modified DFAX analysis shows that Lake Erie loop flow would be substantially higher than it is today.[314]

In MISO's rebuttal testimony addressing the study Mr. Smith performed, and results produced by NYISO witness Smith's analysis, MISO witness Chatterjee stated "Regarding the impacts of making other PARs inactive and measuring impact on loop flow, MISO agrees with

[310] Ex. NYI-38 at 23:16-17.

[311] *See* Ex. NYI-38 at 24:16-17.

[312] *See* Ex. NYI-38 at 24:17-20.

[313] Ex. NYI-1 at 40:16-18.

[314] *See* Ex. NYI-38 at 25:5-10.

Mr. Smith's determination that some other PARs influencing Lake Erie loop flow when bypassed increase lake Erie circulation flow."[315] MISO witness Chatterjee agrees that the MI/ON PARs are not the only PARs whose operation reduces Lake Erie loop flow, but argues that the MI/ON PARs further reduce the risk of significant Lake Erie circulation flows.[316] In other words, the MI/ON PARs provide the *same* benefit as other PARs in the Eastern Interconnection provide. MISO is arguing that the *degree* of the potential loop flow reduction is greater for the MI/ON PARs.

MISO witness Mallinger's rebuttal testimony similarly states that Mr. Mallinger "does not dispute the outcome of the static analysis Mr. Smith performed."[317] However, Mr. Mallinger argues that a correlation analysis included in the *Regional Power Control Device Coordination Study* ("Coordination Study") prepared by MISO, NYISO, PJM and IESO in 2011, using 2009 data (*see* Exhibit S-5) suggests that the operation of the Ramapo PARs may have increased Lake Erie loop flow during a limited set of hours in 2009. Mr. Mallinger argues that in 19.5% of the hours in 2009 the Ramapo PARs were not operated to conform flow to schedule.[318] During some portion of those 19.5% of hours, Mr. Mallinger suggests, the operation of the Ramapo PARs may have increased Lake Erie loop flow by an undetermined quantity. There are several problems with the argument that Mr. Mallinger makes on pages 15 and 16 of Exhibit MSO-3.

First, Mr. Mallinger's argument on pages 15-16 of Exhibit MSO-3 only addresses the Ramapo PARs, and it only discusses the operation of the Ramapo PARs in 19.5% of the hours of 2009. The rebuttal testimony does not address the combined operation of all PARs in the

[315] Ex. MSO-1 at 10:10-13.

[316] *Id*. at 10:13-15.

[317] Ex. MSO-3 at 16:13-14.

[318] Ex. MSO-3 at 15-16.

Eastern Interconnection (excepting only the MI/ON PARs), which is what NYISO witness Smith addresses in Exhibit NYI-38 at 22-25. Mr. Mallinger's rebuttal testimony does not identify any other PARs in the Eastern Interconnection that were arguably operated in a manner that might have increased Lake Erie loop flow.

Second, Mr. Mallinger's argument ignores (and fails to mention) a clear, and often-repeated statement in the Coordination Study that "A strong observed correlation between variables does not necessarily imply that a causal relationship exists between those variables. However, a causal relationship could exist. Further data analysis is required to determine causal relationships."[319] The language from the Coordination Study that Mr. Mallinger quotes at the bottom of page 15 and top of page 16 of MSO-3 is directly followed by a sentence stating "As discussed earlier, a strong observed correlation between variables does not necessarily imply that a causal relationship exists between those variables."[320] Mr. Mallinger's testimony attempts to use Exhibit S-3 to draw conclusions that are expressly contradicted by the language of the Exhibit.

Third, the MISO data in Columns Four, Five and Six of Exhibit NYI-66 indicates that the operation of the MI/ON PARs from April 5, 2012 through July 18, 2012 increased the magnitude of Lake Erie loop flows in 33.7% of intervals during that time period. In 18.6% of intervals, the operation of the MI/ON PARs increased the magnitude of loop flows either at a time when loop flows were already outside the +/-200 MW control band, or the operation of the MI/ON PARs actually caused Lake Erie loop flow to exceed the +/-200 MW control band. The MISO's own estimates of the effectiveness of the MI/ON PARs in 2012 shows that the MI/ON PARs have

[319] Ex. S-5 at 5.

[320] *Id*. at 29.

been a more significant cause of Lake Erie loop flow in 2012 than the Coordination Study suggests the Ramapo PARs might have been in 2009.

Finally, Mr. Mallinger's argument is, in effect, an attack on MISO's own DFAX analysis. MISO's DFAX analysis assumes perfect operation of *all* "active" PARs, including but not limited to the MI/ON PARs. Any attempt to compare the assumptions used in MISO's hypothetical DFAX to real-world results quickly identifies inconsistencies. For example, MISO's DFAX assumes that whenever the MI/ON PARs are being operated to conform flow to schedule, they will remove *all* (100% of) unscheduled power flows at the MI/ON Interface.[321] The real-world data MISO provided in Exhibit NYI-66 proves this has not occurred. From April 5, 2012 to July 18, 2012, the MI/ON PARs have been operating to conform actual power flow to scheduled power flow at the MI/ON Interface. The average absolute value of actual Lake Erie loop flow over the April 5, 2012 to July 18, 2012 period was 214 MW, which is significantly more than the 0 MW loop flow assumed in MISO's DFAX study. The NYISO identifies several other significant problems caused by the unrealistic assumptions used to produce MISO's DFAX in Section VII.A of this initial brief. However, if the MISO's DFAX analysis is deemed a sufficiently accurate representation of expected real-world results that it can be used to allocate the cost of the MI/ON PARs to New York, then using the DFAX study to question aspects of the Joint Applicants' case is equally valid.

F. It Would Not Be Appropriate to Allocate Costs of the Replacement PARs to the NYISO or its Customers Based on Cost Causation Principles

The Joint Applicants have asserted that "cost causation" principles support allocation of a portion of the costs of the Replacement PARs to NYISO and its customers. This assertion is

[321] *See* Ex. MSO-Tab D at 9:17-20 ("By comparison, the contributions from each region's generation to load transfer is shown to be zero for each region when the [MI/ON] interface PARs are controlling, since the control provided by these PARs overrides flow participation impacts on the interface combined flow.").

incorrect. It would not be appropriate to allocate costs of the Replacement PARs to the NYISO or its customers based on those principles, for the reasons summarized below.

ITC's incurrence of the costs of the Replacement PARs was "caused" by ITC's unilateral decision to assume a contractual obligation to install the Replacement PARs in ITC's 2007 Facilities Agreement with Hydro One[322] (see Section III.B.1 of this initial brief). Sections III.B.2 and V.D of this initial brief show that ITC's decision to execute the 2007 Facilities Agreement was made to address the transactional and reliability needs of ITC's customers and ITC's transmission system. To the extent the Joint Applicants argue that these needs were created by Lake Erie loop flow, they have submitted no evidence showing that problems caused by Lake Erie loop flow required ITC to restore the B3N circuit and construct the Replacement PARs. In particular, MISO and ITC have each admitted that they never performed an assessment or identified specific reliability criteria that are potentially violated by Lake Erie loop flow.[323] MISO has further admitted that it did not evaluate the economic benefits of the replacement PARs in the MTEP06 report.[324]

ITC decided to execute the 2007 Facilities Agreement only after it considered all other options, and evaluated the expected benefits to the ITC system. Exhibit NYT-38 shows that ITC considered several options after the Original PAR (and the B3N circuit that the Original PAR was installed on) failed. Exhibit NYT-38 shows that Hydro One and ITC considered whether it was worthwhile to restore the B3N circuit at all. Exhibit NYT-38 suggests that if ITC expected prevailing flow to be from West to East (clockwise) it might not have decided to restore the B3N circuit or to construct the Replacement PARs. The Exhibit explains that *if* prevailing flows were

[322] *See* Ex. PTO-4 at 2-3.

[323] *See* Ex. PTO-4 at 2-3; PTO-5.

[324] Ex. PJM-16.

expected to be East to West (counterclockwise) "then B3N is probably the least expensive way to support needed ITC import capability." The Exhibit also discusses options for reducing Lake Erie circulation that did not involve the B3N circuit or the installation of the Replacement PARs, such as strengthening ITC's ties to its South in order to reduce the Lake Erie loop flow impact of ITC importing power from AEP. The key point to take from Exhibit NYT-38 is that ITC considered many options, including the option of not restoring the B3N circuit at all, then made its decision.

The expected reliability benefits of restoring the B3N circuit and installing the Replacement PARs were identified in MISO's MTEP06 study. These are listed and discussed in Section V.D of this initial brief. The reliability issues identified in MTEP06 as being resolved by the Replacement PARs were not described as having been caused by Lake Erie loop flow,[325] and both ITC and MISO admitted they had performed no studies to demonstrate that any reliability criteria violations or concerns were caused by Lake Erie loop flow.[326] Further, MISO confirmed that: "The contingencies identified in the 2006 MTEP Report and the detailed technical report are the universe of documents of which MISO is aware that identify reliability criteria violations that may arise absent the installation of the PARs."[327] In sum, the Joint Applicants have not shown that there is any causal link between Lake Erie loop flow and the reliability issues described in the MTEP06 report.

Even accepting (for purposes of argument only) that the protection by Detroit Edison and ITC of reliability and transactional interests was necessitated by the impacts of Lake Erie loop flow, the Joint Applicants have failed, as discussed in Section VI.A of this initial brief, to submit

[325] Ex. NYI-50 at 19.

[326] Ex. PTO-4; Ex. PTO-5.

[327] Ex. PTO-4 at 3.

evidence showing the NYISO's *actual* contribution to Lake Erie unscheduled power flows by examining and providing actual data. Instead, MISO submitted a hypothetical planning analysis (the DFAX study) that posits the contributions MISO, NYISO, PJM and IESO might make to Lake Erie loop flow in 2015 under unreasonable and unrealistic assumptions. As demonstrated in Section VII of this initial brief, in numerous respects the DFAX analysis relied upon by MISO and ITC as a basis for cost allocation is fundamentally flawed.

The DFAX analysis purports to estimate the 2015 contribution to loop flow created by NYISO generation-to-load flow. The DFAX analysis relied on by MISO and ITC should be rejected based on the cumulative effect of the following flaws, discussed in detail in Section VII of this initial brief:[328]

- the DFAX analysis should have included all 8,760 hours of the year (see Section VII.A.1);
- the DFAX should have used the load duration curve for each RTO, instead of using a single, aggregate load duration curve (see Section VII.A.2.);
- contributions to flows over the four circuits that comprise the MI/ON Interface should not be netted against each other when determining an ISO or RTO's contribution to the MI/ON Interface flows (see Section VII.A.3);
- the DFAX analysis does not consider the economics of dispatch (see Section VII.A.4);
- the DFAX analysis ignore other regional contributors to Lake Erie loop flow (see Section VII.A.5); and
- the DFAX analysis ignores the contribution of interchange transactions between control areas, even though this contribution was recognized by MISO witness Mallinger[329] (see Section VII.B).

Beyond these specific flaws, the DFAX analysis should be rejected because of the result-oriented fashion in which the analysis and associated cost proposal were developed.

[328] *See* Ex. NYT-19 at 21:444-446.

[329] Ex. MSO-Tab E at 17:11-13.

Finally, the Joint Application fails to recognize and provide a financial credit, as it should, because NYISO and PJM installed and paid for their own PARs and other controllable facilities (including direct current converters and variable frequency transformers) that reduce Lake Erie loop flow.[330] Similarly, the Joint Application admittedly[331] fails to give financial "credit" to NYISO and PJM for their expenditures to develop and implement the "Broader Regional Markets" initiatives that control or mitigate the impacts of Lake Erie loop flow.[332] At the same time, the Joint Application proposes not to charge IESO because Hydro One customers paid the costs of the Hydro One PARs, as discussed in Section IV.C. of this initial brief.

VI. WHAT IS THE EXTENT OF THE CONTRIBUTIONS TO LOOP FLOWS OF MISO, IESO, NYISO AND PJM AND OTHERS, AND DO THEY REPRESENT A BASIS FOR MISO/ITC TO ALLOCATE THE COSTS OF THE ITC PARS TO PJM AND NYISO?

A. MISO and ITC Have Not Presented Evidence of the NYISO's Actual Contribution to Lake Erie Loop Flow

Neither MISO nor ITC submitted evidence showing the NYISO's *actual* contribution to Lake Erie unscheduled power flows by examining and providing actual data. Instead, the Joint Application relies on[333] a hypothetical planning analysis (the DFAX study) that posits the contributions MISO, NYISO, PJM and IESO might make to Lake Erie loop flow in 2015 if each ISO/RTO only uses generation located in its control area to serve its load (an unrealistic assumption), if the impact of transactions on loop flow is ignored, and if the principles of economic dispatch are ignored. For the reasons explained in Section VII of this initial brief, the

[330] Ex. NYI-38 at 21:20-25:10.

[331] Tr. 351:22-352:1.

[332] *See* Section IV.C of initial brief; Ex. NYI-46 at 15:3-18:22.

[333] *See* Joint Application Transmittal Letter at 8 ("the Midwest ISO has identified the extent to which the Midwest ISO, PJM, and the NYISO contribute to the Lake Erie loop flow issue and assigned each region a percentage of ITC's revenue requirement for the New PARs accordingly").

MISO's DFAX analysis is fundamentally flawed and should not be relied on as a basis for cost allocation.

B. It is Unjust and Unreasonable, and Unduly Discriminatory, to Require NYISO and Its Customers to Pay for a Share of Replacement PARs Costs that Are "Caused" by IESO

As discussed in detail in Section IV.C of this initial brief, it would be unjust, unreasonable, and unduly discriminatory, to require the NYISO's customers to be assigned cost responsibility for the Replacement PARs based on Lake Erie loop flow that MISO has determined is caused by IESO and its customers.

VII. WHETHER THE MISO/ITC DFAX STUDY PROVIDES AN ADEQUATE BASIS FOR THE PROPOSED COST ALLOCATION?

A. The DFAX Analysis Is Fundamentally Flawed

The DFAX analysis relied upon by MISO and ITC as a basis for cost allocation is fundamentally flawed. The DFAX analysis purports to estimate the 2015 contribution to loop flow created by NYISO generation-to-load flow. The DFAX analysis relied on by MISO and ITC should be rejected based on the cumulative effect of the flaws discussed in detail below.[334] Despite the NYISO's overall recommendation that the DFAX analysis be rejected, the NYISO addresses each significant flaw of the DFAX analysis and its individual impact below.

1. MISO's DFAX Analysis Should Have Included All 8,760 Hours of the Year

MISO's DFAX analysis relied on three representative hours, each representing a multi-hour load block, to estimate each region's contribution to flows at the MI/ON Interface for the entire year.[335] A single hour was used to represent the "peak" 248 hours, a second to represent

[334] *See* Ex. NYT-19 at 21:444-446.

[335] Tr. 368:16-22.

the "shoulder peak" 6,784 hours and a third to represent the "light load" 1,728 hours.[336] The use of just three load blocks penalizes New York by mis-assigning a significant portion of the NYISO's flow participation to higher load hours, and over-counting the MWh used to determine the New York portion of the DFAX cost allocation.[337] Instead of using load blocks, MISO should have performed the DFAX analysis by calculating a weighted participation percentage for every hour of the year, as NYISO witness Zach Smith recommended in his testimony.[338] On cross-examination, Mr. Chatterjee admitted that an 8,760 hour load representation would more accurately reflect each RTO's load over the entire year than the three load block method he employed to produce the MISO's DFAX analysis.[339]

Accurately time-normalizing the DFAX analysis is critical to calculating each region's weighted participation percentage. The use of only three representative load blocks cannot accurately depict a region's expected electricity usage over the 8,760 hours of a year.[340] Each region's electricity usage varies significantly more than is captured in the three representative load blocks used in the DFAX analysis.[341] The slope of each ISO/RTO region's load duration curve, as shown in Exhibit NYI-39, depicts how significantly each region's electricity usage varies over the hours of a year.[342] The drastic variation in electricity usage makes a representation using only three blocks a gross over-simplification.[343]

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[336] Tr. 373:4-21.

[337] Ex. NYI-38 at 14:20-15:19.

[338] Ex. NYI-38 at 15:21-16:2.

[339] Tr. 399:15-400:5.

[340] Ex. NYI-38 at 14:12-18.

[341] Ex. NYI-39.

[342] Ex. NYI-39.

[343] Ex. NYI-38 at 14:16-18.

The three representative load blocks used in MISO's DFAX analysis had to be distributed over an entire year in order to determine each region's weighted participation over the MI/ON Interface for that period. Time-normalizing was MISO's chosen method of weighting the three hours in an attempt "to calculate the effects of contributions to loop flows through the entire year."[344] Mr. Chatterjee determined that the peak load hour should be applied to approximately 3% of hours, the shoulder peak hour should be applied to approximately 77% of hours and the light load hour should be applied to approximately 20% of hours.[345] Mr. Chatterjee, however, agreed that the most accurate way to time normalize the DFAX analysis would be to use all 8,760 hours of the year, rather than using just three representative hours.[346] Performing the DFAX analysis for all 8,760 hours of the year would avoid the need to determine how many hours of the year a representative hour applies to, and more accurately considers expected participation in each hour studied.

In his rebuttal testimony, Exhibit MSO-1, Mr. Chatterjee speculated that the 8,760 hour analysis would not result in a significantly different result than the three load block analysis MISO used.[347] However, Mr. Chatterjee did not perform any study or analysis to support his speculation.[348] Contrary to Mr. Chatterjee's unsupported speculation, NYISO witness Smith testified that performing the analysis for every hour of the year will have a significant impact on the NYISO's participation because the MISO's analysis significantly over-counted and over-attributed megawatt-hours to the NYISO.[349]

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[344] Tr. 268:20-23.

[345] *See*, Ex. MSO-Tab D at 10:4-21 and MSO-2.

[346] Tr. 400:15-21.

[347] Ex. MSO-1 at 8:5-8.

[348] Tr. 405:1-7.

[349] Ex. NYI-38 at 14:20-15:23.

Instead of analyzing all 8,760 hours, MISO based its DFAX study on three typical hours representative of 100%, 85%, and 50% of peak load levels.[350] MISO assumed that load remains steady at 85% of peak load for over nine months of the year.[351] The use of 85% of peak load for more than nine months of the year is unrealistic and unnecessarily penalizes New York. The New York load duration curve clearly indicates that load in New York is lower than 60% of its peak load for eight months of the year and lower than 50% of its peak load for four months of the year.[352] When the curve used for MISO's study, "Study-NYISO Load," is above the "NYISO Load" hourly load duration curve in Exhibit NYI-42, the MISO's analysis is over-counting the MWh used to determine New York's portion of the cost allocation.[353] The area between the curves represents the amount of MWh over-counted, since New York's load is predominantly less than the load assumed in the Study –NYISO Load curve utilized by MISO. In fact, MISO over-assigned approximately 40,000,000 MWh to the NYISO in MISO's proposed cost allocation.[354]

The NYISO and Mr. Chatterjee are in agreement that using all 8,760 hours of the year would produce the most accurate result.[355] MISO should have performed its DFAX analysis in the manner Mr. Smith recommended in his testimony to produce a more accurate assessment of each region's expected contribution to flows across the MI/ON Interface.[356] That is, the MISO should have conducted 8,760 DFAX runs for each region, one DFAX run for every hour of the

[350] Tr. 247:1-13.

[351] Ex. NYI-38 at 15:8-9.

[352] Ex. NYI-38 at 15:11-13; See Ex. NYI-42.

[353] Ex. NYI-38 at 15:13-16.

[354] Ex. NYI-38 at 15:18-19.

[355] Tr. 399:15-400:5.

[356] Ex. NYI-38 at 15:21-16:2.

year.[357] Performing 8,760 DFAX runs would have resulted in a more accurate weighted participation percentage for each region and would not have required extraordinary effort by the Joint Applicants due to the sophisticated software packages available to conduct these analyses.[358] Moreover, Mr. Chatterjee acknowledged that an 8,760-hour representation is used for MISO's forward-looking resource adequacy analysis incorporated in its MTEP planning process,[359] for similar analyses in other regions of the eastern interconnection,[360]and for production cost analysis for MISO's "top congested flowgate" study.[361]

2. MISO's DFAX Should Have Used the Load Duration Curve for each RTO, Instead of Using a Single, Aggregate Load Duration Curve

MISO's use of an aggregate load duration curve for MISO, NYISO and PJM was improper for the DFAX analysis. MISO should have used each region's individual load duration curve to perform the DFAX analysis over all 8,760 hours of the year to calculate each region's individual participation over the MI/ON Interface.[362] According to Mr. Chatterjee's rebuttal testimony, "MISO is not opposed to using individual region's load duration curves as included in the Ventyx database."[363] Mr. Chatterjee asserts that using each region's load duration curve will not result in significantly different weighted participation percentages.[364] Calculating the NYISO's participation based on the NYISO's load duration curve, while still using MISO's overall method, resulted in a 0.8% reduction in NYISO's participation.[365] However, using the

[357] Ex. NYI-38 at 15:21-16:2.

[358] Ex. NYI-38 at 15:21-16:2.

[359] Tr. 409:18-21.

[360] Tr. 410:7-10.

[361] Tr. 410:3-6.

[362] *See*, Ex. NYI-38 at 9:9-17; Ex. NYI-39; Ex. NYI-40; and Ex. NYI-41.

[363] Ex. MSO-1 at 7:22-23.

[364] Ex. MSO-1 at 8:1-4.

[365] Ex. MSO-1 at 8:1-4.

correct load duration curve is just one step in correcting the flawed MISO DFAX analysis. Performing the DFAX analysis for all 8,760 hours of the year (for the reasons explained above) and correcting the other flaws in the DFAX analysis that are discussed herein, in addition to using each region's individual load duration curve, would have resulted in more dramatic adjustments to the weighted participation percentages and cost allocation, and would produce a more accurate result.

If the DFAX analysis used the NYISO's forecasted 2015 load duration curve, rather than the aggregate load duration curve, for NYISO there should be 221 hours between 100% and 85% of peak load, 5,637 hours between 85% and 50% of peak load, and 2,902 hours at less than 50% of peak load. MISO's calculation of NYISO's DFAX participation incorrectly assigned 27 hours to the 100% (peak) load block that should have been assigned to the shoulder peak load block, and incorrectly assigned 1,174 hours to the 85% (shoulder peak) load block that should have been assigned to the light load block.[366] These 1,174 hours should have been added to the 1,728 hours assigned to the 50% (low) load block for NYISO.[367] MISO's effort to shoe-horn the NYISO into an aggregate load duration curve developed using the combined MISO, PJM and NYISO load duration curves resulted in an inflated participation factor and resulting cost allocation to the NYISO,[368] while reducing MISO's relative participation and cost allocation. NYISO witness Smith's direct testimony presented corrected DFAX analysis results using each region's load duration curve.[369]

[366] Ex. NYI-38 at 11:1–12:7.

[367] Ex. NYI-38 at 11:1–12:7.

[368] Ex. NYI-38 at 9:24-12:7.

[369] Ex. NYI-38 at 13:2-6.

The inflated NYISO participation factors calculated in the MISO DFAX analysis result from NYISO's trend towards lower participation as load decreases.[370] NYISO's participation factors on the MI/ON Interface are greatest when the NYISO load is highest, and NYISO's participation factors are the lowest when the NYISO load is lowest. While the foregoing statement might seem intuitive (NYISO's participation is highest when its load is highest), participation factors and load are NOT necessarily aligned in the DFAX analysis.[371] PJM has a higher participation factor as its load declines.[372] According to MISO's analysis, MISO also has a higher participation on the MI/ON Interface as its load declines.[373] However, if MISO's contributions over the four circuits of the MI/ON Interface are not netted to calculate an overall interface contribution, (see Section VII.A.3 of this initial brief) its participation factors remain relatively uniform for all three load conditions. In other words, the NYISO's cost responsibility declines if more of the NYISO's hours are accurately represented as occurring in the light load period.[374] Applying the aggregate load duration curve to the NYISO over-assigns high load hours to New York and under-assigns low load hours to New York.

MISO witness Chatterjee identified examples of instances in which the aggregate load duration curve over-assigns MWs to the NYISO. For example, in hour 2,001 on the load duration curve, NYISO's load duration curve shows that load in NYISO is approximately 65% of peak while the MISO's study load duration curve assumes 75% of peak for the DFAX analysis.[375] In addition, the NYISO's load duration curve shows that load in NYISO in hour

[370] Ex. NYI-38 at 12:9-16.

[371] Ex. NYI-38 at 12:9-16.

[372] Ex. NYI-38 at 12:16-21.

[373] Ex. NYI-38 at 12:16-21.

[374] Ex. NYI-38 at 12:17-19.

[375] Ex. NYI-42; Tr. 403:17-21.

5,001 is approximately 55% of peak and in hour 6,900 is less than 50% of peak while the MISO's study load duration curve assumes 75% of peak in both hours for the DFAX analysis.[376] As a result, NYISO is penalized in the overall weighted participation and receives a larger than justified cost allocation.[377] Consistent with MISO witness Chatterjee's rebuttal testimony,[378] MISO should have used each individual region's load duration curves, as included in the Ventyx database, to perform the DFAX analysis.

3. Contributions to Flows over the Four Circuits that Comprise the MI/ON Interface Should Not be Netted Against Each Other when Determining an ISO or RTO's Contribution to the MI/ON Interface Flows

MISO's unilateral decision to permit directional contributions to the flow participation over the four circuits that comprise the MI/ON Interface to offset each other is inappropriate and inconsistent with other decisions that MISO made with regard to netting of contributions in the DFAX study. MISO's decision to allow contributions to offset in some circumstances provided evidence that MISO's DFAX analysis was crafted to favor the Joint Applicants' interests.

MISO's flow contributions on the MI/ON Interface are different from the NYISO, PJM and IESO contributions. When power is permitted to flow freely over the four circuits of the MI/ON Interface the four circuits actually participate in the transfer of power from MISO generation to MISO load in addition to transferring Lake Erie loop flow.[379] Unlike the NYISO, PJM and IESO power flows in the DFAX analysis, a significant quantity of MISO's power flows "loop" out of, then back into MISO across the four circuits that comprise the MI/ON Interface.[380]

[376] Ex. NYI-42; Tr. 403:25-404:16.

[377] Ex. NYI-38 at 12:23-13:6.

[378] Ex. MSO-1 at 7:22-23.

[379] Ex. NYI-38 at 6:14-16.

[380] Ex. NYI-38 at 6:17-18.

The MISO DFAX analysis indicates that MISO power flows from Michigan to Ontario (positive distribution factors) on the L4D and L51D circuits, and flows back from Ontario to Michigan (negative distribution factors) on the J5D and B3N circuits.[381]

By summing the directional participation factors on all four of the circuits as MISO has done, and netting the flows with positive distribution factors against the flows with negative distribution factors, MISO's use of the MI/ON Interface and true contribution to flows on the B3N Circuit is understated. In particular, MISO is using more of the Replacement PARs' capability than the participation factors used in the MISO's DFAX analysis reflect.[382] MISO's actual participation on the MI/ON Interface is inappropriately reduced by netting MISO's contributions across the four circuits.[383] MISO's participation factor should be 280 in the peak case, yet the peak participation factor MISO calculated for itself is only 123.[384] MISO's participation decreases in all three cases the DFAX analysis studied (peak, shoulder, light load) because MISO nets its directional flow participation on the four circuits that comprise the MI/ON Interface.[385]

On cross-examination by counsel for the PJM Transmission Owners, MISO witness Chatterjee indicated that he opposed the netting of contribution factors because, "it is recognized in some cases, the aggregate impact of PJM could have a negative impact on reliability and in some cases it could have a positive impact on reliability. The clockwise or the counterclockwise would both be harmful."[386]

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[381] Ex. NYI-38 at 6:19-21.

[382] Ex. NYI-38 at 6:21-7:2.

[383] Tr. 419:8-420:24.

[384] Ex. NYI-74.

[385] Ex. MSO-1B.

[386] Tr. 367:25-368:4.

On cross examination by NYISO counsel, Mr. Chatterjee agreed that, at any given instant, an ISO's or RTO's contribution to Lake Erie loop flow can be harmful or beneficial.[387] Mr. Chatterjee also agreed that on a peak load day when loop flow was significantly counterclockwise in direction, MISO's 151 MW peak contribution to counter-clockwise loop flows across the B3N circuit[388] could have a significant impact,[389] even though MISO's contribution to net flow across the entire MI/ON interface (all four circuits) would be less than MISO's 151 MW counter-clockwise contribution on the B3N circuit.[390]

Mr. Chatterjee also agreed that MISO's decision to net the directional participation of its flows on the four circuits that comprise the MI/ON Interface tended to reduce MISO's total DFAX participation, and thus the cost responsibility MISO is assigned in the DFAX analysis.[391]

Netting flow contributions across the four transmission circuits that comprise the MI/ON Interface reduces MISO's DFAX cost allocation, but has little to no impact on NYISO or PJM. NYISO's total participation on the MI/ON Interface is the same regardless of netting across the circuits.[392] PJM's participation decreases from 33 to 28 (by 5 MW) in the shoulder peak case when participation is netted across the four circuits.[393] In other contexts, MISO witness Chatterjee was opposed to netting.[394] Netting participation across the four circuits appears to be

[387] Tr. 419:14-18.

[388] *See* Ex. NYI-74.

[389] Tr. 419:19-23.

[390] Tr. 419:24-420:3.

[391] Tr. 420:4-19.

[392] Ex. MSO-1B (NYISO's flow participation on all four circuits is in the same direction in all three load cases).

[393] Ex. MSO-1B (PJM's flow participation on all four circuits is in the same direction in the peak case and light load case).

[394] Tr. 370:6-10.

one way that MISO tailored the DFAX analysis it developed to produce results that are consistent with the MISO's interests.

4. DFAX Analysis Does Not Consider the Economics of Dispatch

The MISO DFAX study is not reflective of real-world electric power system operation practices. MISO does not account for any economic impacts of generation dispatch in its hypothetical DFAX analysis.

The DFAX study was performed by increasing the output of each generator within an RTO, *pro rata*, based on each generator's maximum MW output, to serve the load within that RTO.[395] MISO's approach dispatches *all* generation within an RTO *pro rata*, based on each generator's maximum output, regardless of the actual costs to dispatch that generator. In other words, the DFAX study dispatched 80 year old oil-fired generators on an equivalent basis with nuclear power plants and newly installed (latest technology) combined cycle power plants.

On cross-examination Mr. Chatterjee acknowledged that, in contrast to the DFAX analysis, RTOs do not "serve their load by uniformly ramping up all of the generation in their control area."[396] Instead, generation within an RTO is dispatched to achieve the least cost solution to serve load, while meeting all applicable reliability requirements/rules. ISOs and RTOs use security constrained economic dispatch software, to dispatch generation throughout their entire system to achieve a least cost economic solution.[397] Each ISO's or RTO's generation-to-load impacts on Lake Erie loop flow are, as a result, affected by the economics of dispatch.

[395] Tr. 440:5-25.

[396] Tr. 440:5-8.

[397] Tr. 1077:4-6.

MISO's hypothetical DFAX analysis does not account for economics in determining generator dispatch. Instead, the DFAX assigns MW output to all ISO/RTO dispatched generators, *pro rata*, weighted based on each generator's maximum output. MISO's unrealistic dispatch assumptions produced unrealistic DFAX analysis flow participation results.[398] An analysis that accounts for economic dispatch of generation would produce dramatically different flow participation result.

The impact of generation-to-load power flows, measured across the MI/ON Interface is dependent on the location of the generation and the load.[399] RTOs dispatch their least expensive resources first, to the greatest extent practical. For example, PJM operates less expensive generation in western PJM (Illinois) to serve load in eastern PJM (Pennsylvania, New Jersey, Maryland).[400] Dispatching generation in this manner results in large power flows across the PJM transmission system from west to east. PJM states that its dispatch of western PJM resources to serve eastern PJM load also causes some clockwise loop flow from PJM, through MISO, IESO, NYISO and back into PJM.[401] However, MISO's DFAX analysis does not take into account the differences between PJM's western and eastern generation fleets that affect PJM's economic dispatch. The peak scenario in the DFAX analysis indicates that, on an aggregate basis, PJM has approximately 101,000 MW of installed generation in PJM West, and approximately 99,000 MW of installed generation in PJM east.[402] The DFAX assumes that each incremental MW of PJM load is served (approximately) 50.5% by PJM west generation and (approximately) 49.5%

[398] *See* Tr. 440:5-8 and Ex. MSO-2.

[399] *See* Ex. NYT-19 at 17:334-346.

[400] Ex. PJM-1 at 37:20-23.

[401] Ex. PJM-1 at 37:19-38:5 and Tr. 1077:7-15.

[402] *See* Ex. MSO-1B (including underlying power flow models).

by PJM east generation. The dispatch assumption used in the DFAX analysis is wholly inconsistent with PJM's testimony regarding the dispatch of its generation.

The failure to account for economic dispatch of generation creates a significant flaw in the DFAX analysis and MISO's proposed cost allocation. Uniform ramping of all generation within an RTO does not reflect the actual dispatch that will occur under any conditions.[403] The failure to model realistic generator dispatch patterns also impacts MISO, NYISO, and IESO's contributions. When considered across all four of the RTOs around Lake Erie, the discrepancy is likely to have a significant impact on the DFAX analysis weighted participation percentages and resulting cost allocation. The DFAX analysis could have, and should have, been conducted in a manner that accounted for each region's typical economic dispatch patterns. MISO could have input a typical dispatch pattern for each case studied.[404]

MISO's DFAX analysis was tailored to the specific purpose of determining an appropriate cost allocation for the Replacement PARs by identifying expected contributions to Lake Erie loop flow in a modified, hypothetical 2015 planning case.[405] MISO's analysis was not performed to satisfy typical reliability analysis procedures or production cost analysis procedures.[406] MISO's failure to account for economic dispatch in its DFAX analysis is a significant omission. Because the dispatch used in the proposed DFAX cost allocation proposal bears no relationship to real-world generation dispatch, MISO has not met its burden of proving that its proposed cost allocation method is just and reasonable, and not unduly preferential, prejudicial or discriminatory.

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[403] Tr. 440:5-8.

[404] MISO should have access to economic dispatch data through Ventyx or should be able to obtain such data from a similar source.

[405] Ex. MSO-Tab D at 5:8-13 and 8:17-21.

[406] *See* Tr. 408:21-409:2 and Tr. 407:21-408:1.

5. The DFAX Analysis Should Have Associated Cost Allocation with Flow Participation Solely on the B3N Circuit

Another flaw in the DFAX analysis discussed in NYISO witness Smith's direct testimony,[407] was its failure to calculate the generation-to-load flow participation over only the B3N circuit, on which the Replacement PARs are located.[408] It was not appropriate for the Joint Applicants to base the DFAX analysis on the ISOs and RTOs contributions to flows on all four of the circuits that comprise the MI/ON Interface.[409] The costs of the Replacement PARs on the B3N circuit are the only costs that MISO and ITC are attempting to allocate to NYISO and PJM.[410] The Hydro One PARs were built prior to the Replacement PARs, were not built by ITC, do not belong to ITC, are not located in the MISO (or in the United States), and are not the subject of this cost allocation proceeding.[411] The B3N circuit, on which the Replacement PARs are installed, should, therefore, have been the circuit used to determine the flow contribution of each ISO/RTO in the DFAX analysis.

Mr. Smith performed a corrected DFAX analysis in which he set only the Replacement PARs on the B3N circuit to "inactive," while setting all of the Hydro One PARs to "active."[412] The configuration NYISO witness Smith used allows all of the Hydro One PARs to control flow equal to schedule.[413] Under the NYISO's corrected DFAX calculation method the L4D, L51D, and J5D circuits did not participate in the generation-to-load transfers that are used to determine

[407] Ex. NYI-38 at 6:2-8:1.

[408] Ex. NYI-38 at 6:2-9.

[409] Ex. NYI-38 at 6:11-7:6.

[410] Tr. 430:25-431:3.

[411] Ex. NYI-38 at 6:6-7.

[412] Mr. Smith's corrected analysis did not correct all of the flaws identified in this initial brief, it only corrected the MISO's use of participation on the entire MI/ON Interface to determine cost responsibility for the Replacement PARs.

[413] Ex. NYI-38 at 7:10-12.

each ISO's/RTO's flow contribution. Only the B3N circuit participated in the generation-to-load transfers, and the resulting DFAX analysis focused on four ISOs/RTOs flows over the B3N circuit.[414] Mr. Smith's DFAX analysis produced a more focused assessment of generation-to-load impacts on the B3N circuit; the circuit on which ITC's Replacement PARs are installed.[415] The results of NYISO witness Smith's (partially) corrected DFAX analysis are set forth below (both with and without IESO):

RTO	Weighted Participation	Weighted %
Midwest ISO	154.11	27.67%
PJM	60.48	10.86%
NYISO	70.74	12.70%
IESO	271.74	48.78%

With IESO excluded from participating in the cost allocation (which would be inappropriate for the reasons explained in Section IV.C. of this initial brief), the NYISO's corrected DFAX analysis produced the following weighed participation percentages:

RTO	Weighted Participation	Weighted %
Midwest ISO	154.11	54.01%
PJM	60.48	21.20%
NYISO	70.74	24.79%

Only considering flows over the B3N circuit and Replacement PARs also avoids the issue of netting participation over the four circuits that is discussed in Section VII.A.3 of this

[414] Ex. NYI-38 at 7:12-15.

[415] Ex. NYI-38 at 7:16-18.

initial brief because each ISO's or RTO's generation-to-load transfers only participate on the B3N circuit in one direction.[416]

In sum, consistent with NYISO witness Smith's testimony,[417] the MISO's DFAX analysis is flawed. To determine an appropriate cost allocation for transmission facilities that are located on the B3N circuit, the DFAX should have only considered participation over the B3N circuit.

6. Cumulative Impact on DFAX Analysis of Only Considering Flows Over the B3N Circuit and Using Each RTO's Load Duration Curve

The magnitude of the DFAX flaws becomes more evident when multiple flaws are corrected simultaneously. The NYISO performed a modified DFAX analysis that corrected both MISO's failure to account for only the flows over the B3N circuit and MISO's failure to use each RTO's load duration curve to determine that region's weighted participation. The cumulative results further reduce NYISO's weighted participation percentage below the results provided in Section VII.A.5 of this initial brief, which only addressed limiting the analysis to the flows over the B3N circuit, and did not incorporate the NYISO's proposed correction to apply each RTO's load duration curve.

RTO	Weighted Participation	Weighted %
Midwest ISO	216.41	40%
PJM	72.72	13%
NYISO	66.04	12%
IESO	188.70	35%

[416] Tr. 418:13- 419:7.

[417] Ex. NYI-38 at 6:2-9.

With IESO excluded from participating in the cost allocation (which would be inappropriate for the reasons explained in Section IV.C. of this initial brief), the NYISO's modified DFAX analysis produced the following weighed participation percentages:

RTO	Weighted Participation	Weighted %
Midwest ISO	216.41	61%
PJM	72.72	20%
NYISO	66.04	19%

The NYISO's weighted participation percentage would be smaller still if the DFAX analysis was performed in a manner that accounted for economic dispatch, each region's load duration curve for 8,760 DFAX simulations (one for each hour in the year) and only participation over the B3N circuit as discussed in Sections VII.A.1, VII.A.2, VII.A.4 and VII.A.5 of this initial brief.

7. Other Regional Contributors to Lake Erie Loop Flow

Other flaws in the DFAX analysis include ignoring the cumulative contribution of regions other than MISO, NYISO, PJM and IESO to unscheduled Lake Erie power flows. The multitude of small "contributors" illustrates that if regions are permitted to assess charges to each other on the basis of asserted "benefits" in the absence of regional agreements, this "chain reaction" and ensuing litigation will have no logical stopping place.[418]

The MISO's DFAX analysis is flawed for all of the reasons discussed in this section of the initial brief. The DFAX analysis flaws compound one another to result in a substantially inflated NYISO weighted participation percentage. The NYISO's weighted participation

[418] Ex. NYI-38 at 16-19 (referencing Ex. NYI-43).

percentage would be a fraction of the percentage claimed by the Joint Applicants if the DFAX analysis had corrected these flaws.

B. The DFAX Analysis and Associated Cost Allocation Proposal Were Developed in a Result-Oriented Fashion that Should Be Rejected

The DFAX analysis should also be rejected as a basis for cost allocation because it was developed in a result-oriented fashion. To produce the DFAX analysis it included in the Joint Application MISO developed a variety of different DFAX scenarios, and ultimately chose an approach that avoided assigning any portion of the cost of the Replacement PARs to entities scheduling transactions over those facilities, and that minimized the overall allocation to the MISO.

Responses to discovery requests show and cross-examination of MISO witness Chatterjee confirms that, while developing the method they would use to perform the DFAX study, MISO and ITC considered allocating a portion of the cost of the Replacement PARs to entities scheduling transactions on the MI/ON Interface. This approach was abandoned when ITC realized that "the largest portion of the cost would effectively be collected from ITC Transmission customers."[419] During cross-examination, Mr. Chatterjee stated that scheduled transactions have contributed, and continue to contribute, to the loop flow on the MI/ON Interface,[420] and that entities scheduling imports and exports over the MI/ON Interface would benefit from avoiding curtailment of those transactions.[421] However, the DFAX study does not account for Lake Erie loop flow that is caused by transactions,[422] and parties scheduling

[419] Ex. NYT-22 at 4.

[420] Tr. 317:23-318:1.

[421] Tr. 317:15-22.

[422] Ex. MSO Tab D at 4:22-5:2; Ex. MSO Tab E at 17:11-13; Tr. 514:3-5.

transactions over the MI/ON Interface are not assigned any cost responsibility under the proposed allocation that MISO and ITC included in the Joint Application.

Despite a MISO data response prepared by Mr. Chatterjee to the contrary,[423] during cross-examination Mr. Chatterjee admitted that he developed and MISO considered many different DFAX scenarios before proposing the method that MISO and ITC used in the Joint Application.[424]

Exhibit PTO-12 shows MISO analyzed at least eight different DFAX scenarios prior to selecting the DFAX analysis that was presented as the basis for MISO/ITC's proposed cost allocation.[425] There are many factors that MISO considered while it was developing the DFAX, including: (i) whether to include IESO's participation over the MI/ON Interface, (ii) whether to consider impact on the MI/ON Interface from each region's generation or from each region's load, (iii) whether to weight each PAR differently based on size, and (iv) whether to consider the direction of participation.[426]

Exhibit PTO-12 demonstrates that there were a number of analytic approaches MISO and ITC considered in developing the DFAX analysis. In the end, it appears that MISO and ITC chose the approach that provided the result they desired (less allocation to MISO and ITC). The DFAX analysis MISO submitted in this proceeding presents an unreliable basis for determining an appropriate cost allocation.

[423] Ex. PJM-23.

[424] Tr. 379:5-380:5.

[425] Ex. PTO-12.

[426] Ex. PTO-12.

MISCELLANEOUS ISSUES

VIII. WHETHER THE FILING CREATES A SERVICE OBLIGATION OF MISO AND ITC TO NYISO OR PJM OR THEIR CUSTOMERS AND, IF SO, WHAT IS THE NATURE OF THE OBLIGATION?

The Joint Applicants argue that the NYISO's customers should be required to pay approximately 29 percent of the cost of ITC's Replacement PARs. However, the tariff revisions that the Joint Applicants propose do not identify, explain or describe the product or service that the NYISO, or its customers, will receive in return for paying approximately 29 percent of the cost ITC incurs to construct and maintain the Replacement PARs (including a rate of return on ITC's investment). At the hearing, ITC witness Grover admitted that MISO's proposed Schedule 36 and Attachment SS contain no description of the service that the NYISO's customers will receive in return for their payments.[427]

The Joint Applicants proposed tariff revisions specify a payment obligation that applies to NYISO and PJM customers, but no corresponding service obligation that applies to MISO or ITC. In fact, the Joint Applicants proposed tariff revisions do not specify *any* service standard(s) that the Joint Applicants must meet in order to be paid.[428] To the contrary, the MISO informed the NYISO that the Joint Applicants' proposed Tariff revisions *require* the MISO to bill the NYISO for the Replacement PARs at times when the Replacement PARs or other MI/ON PARs are out-of-service.[429] When the Replacement PARs tripped and were out of service from May 29 to June 5, 2012, MISO stated that the bill it sent to NYISO for June 2012 would not be discounted due to the outage.[430]

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[427] Tr. 126: 24-127:4.

[428] Ex. NYI-1 at 13:23-25.

[429] Ex. NYI-1 at15:5-17; NYI-7; NYI-8.

[430] Ex. NYI-65 at 3.

In response to a NYISO discovery request MISO stated that it is not subject to any tariff obligation to provide reliable service to the NYISO.[431] MISO responded "no" to a NYISO data request asking whether MISO and ITC would be subject to an obligation to provide reliable service to NYISO customers and PJM customers that are not (other than paying for a portion of the cost of the Replacement PARs) MISO customers.[432] In response to a similar NYISO data request to ITC, ITC responded that it does not believe it would have any service obligation to the NYISO or to any New York Transmission Owner.[433]

The Joint Applicants' proposal to charge NYISO customers for a service that is not described, in any manner, in the MISO's tariff, and that is not subject to any service standards, of any sort, is unjust and unreasonable. The fact that MISO has defined service obligations to its own customers, but not to the NYISO and PJM customers who would have to pay for the Replacement PARs, is unduly discriminatory, unduly preferential, and unduly prejudicial. The Commission should reject the Joint Applicants proposed tariff revisions and instruct the Joint Applicants to refund all payments NYISO and PJM have made under MISO's proposed Rate Schedule 36, with interest.

[431] Ex. NYI-5.

[432] Ex. NYI-6.

[433] Ex. NYI-9.

IX. WHETHER AND TO WHAT EXTENT WILL THE PARS CONTROL LAKE ERIE LOOP FLOW, INCLUDING WHETHER, IF ANY OF THE ITC PARS (OR THE HYDRO ONE PARS) ARE UNAVAILABLE, BYPASSED, OR NOT BEING OPERATED IN A MANNER THAT IS CONSISTENT WITH THE PRESIDENTIAL PERMIT ISSUED TO ITC BY THE DEPARTMENT OF ENERGY, NYISO OR PJM OR THEIR CUSTOMERS NONETHELESS SHOULD BE REQUIRED TO PAY THE CHARGES AT ISSUE IN THIS PROCEEDING?

A. MISO's and ITC's Claim that the MI/ON PARs Will Remove 600 MW of Loop Flow (Almost) All the Time is Vastly Overstated

The Joint Application and the MISO and ITC supporting testimonies, repeatedly state that the MI/ON PARs "are expected to fully mitigate Lake Erie loop flows approximately 74% of the time, and reduce them by approximately 600 MW the remainder of the time."[434] MISO witness Thomas Mallinger explained the Joint Applicants' claim in his Direct Testimony:

> The Michigan-Ontario PARs, including the New PARs, are expected to fully mitigate Lake Erie loop flows approximately 74% of the time, while any remaining loop flow overage will be addressed through existing market solutions. To explain, the Michigan-Ontario PARs have the ability to control up to 600 MW of Lake Erie loop flows. [footnote omitted] This means the Michigan-Ontario PARs will be able to hold actual flows equal to scheduled flows across the interface as long as the potential loop flow (defined as the loop flows that would exist if the Michigan-Ontario PARs were not regulating) does not exceed 600 MW. Once the potential flow reaches 600 MW, the Michigan-Ontario PARs will have reached their maximum loop flow control capability. As potential loop flows exceed 600 MW, there will be a one-for-one increase of loop flows across the interface (for every 1 MW increase of potential loop flow there will be a 1 MW increase of actual loop flow across the interface).[435]
>
> [D]uring the period of time when the Michigan-Ontario PARs are not able to maintain actual flows equal to scheduled flows, the Michigan-Ontario PARs will still provide a 600 MW offset of potential circulation flows that will reduce the likelihood of TLR or the market-to-market process being needed to manage congestion caused by loop flows.[436]

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[434] Joint Application Transmittal Letter at 6; Ex. MSO-Tab D at 31:18-20 ("the operation of the MI-ON PARs will fully mitigate the problem 74% of the time and mitigate it by 600MW the remainder of the year"); Ex. MSO-Tab H at 8:18-20 ("The Midwest ISO anticipates that the Michigan-Ontario PARs are expected to fully mitigate Lake Erie loop flows approximately 74% of the time, and reduce them by approximately 600MW the remainder of the time.").

[435] Ex. MSO-Tab E at 19:5-17.

[436] Ex. MSO-Tab E at 20:10-14.

ITC rebuttal witness Dr. Ira Shavel offered the following explanations of the MI/ON PARs loop flow control capability:

> With PARs in operation on the four lines connection Michigan and Ontario, up to 600 MW of loop flow can be controlled. Thus, when loop flow is between +600 MW (clockwise into Ontario) and -600 MW (counterclockwise into Michigan) it can be eliminated. When it is outside of the 600 MW band it can be reduced by 600 MW. For example, if loop flow is 800 MW, the PARs will reduce it to 200 MW.[437]

NYISO cross-examination of Dr. Shavel:

> **Q** So you believe it's a realistic assumption to expect that the operation of the PARs will reduce Lake Erie loop flow to zero or remove the full 600 megawatts of Lake Erie loop flow just about every hour of every day of every year?
>
> **A** To a small number, if not to zero, yes.[438]
>
> …
>
> **Q** Should the Commission expect Lake Erie loop flows in excess of 600 megawatts to be reduced by 600 megawatts by the operation of the Michigan-Ontario PARs?
>
> **A** Yes.
>
> **Q** At all times?
>
> **A** Yes.[439]

On cross-examination, the NYISO asked MISO witness Mallinger what the term "fully mitigate" means.

> **Q** On page 19, lines 5 to 6 of your direct testimony, Exhibit MSO tab E, you state that "The Michigan-Ontario PARs, including the new PARs, are expected to fully mitigate Lake Erie loop flows approximately 74% of the time." What do

[437] Ex. ITC-1 at 18:26-19:2.

[438] Tr. 697:10-15 (corrected).

[439] Tr. 698:14-19.

you mean when you say "fully mitigate"? I'm not asking about the 74 percent. My question is, what does "fully mitigate" mean?

A "Fully mitigate" means the capability of the PARs to completely manage the loop flows.

Q The capability to or the actual management?

A The actual management of the PARs.

Q The actual management of the loop flow?

A Of the loop flows.

Q So if but for the Michigan-Ontario PARs there would have been 600 megawatts of loop flow in a particular direction, clockwise or counterclockwise, it doesn't really matter, does the Midwest ISO expect that it and IESO will operate the Michigan-Ontario PARs to bring Lake Erie loop flows to near zero megawatts?

A Yes.[440]

The Joint Applicants have not submitted any evidence supporting their claim that the MI/ON PARs will control 600 MW of Lake Erie loop flow nearly 100 percent of the time.[441] The NYISO's Vice President of Operations, Wesley Yeomans explained why the operating effectiveness claimed by MISO and ITC was vastly overstated in his direct testimony.[442] Section IX.B of this initial brief explains that actual MI/ON PAR operating data that MISO provided supports NYISO witness Yeomans' testimony and shows that the MI/ON PARs have not effectively conformed actual power flows to scheduled power flows.[443] In fact, the data shows that the operation of the MI/ON PARs frequently increased Lake Erie loop flow.

[440] Tr. 492:24-493:19.

[441] Ex. MSO Tab E at 19:8-12.

[442] Ex. NYI-1.

[443] *See* Ex. NYI-66.

1. MISO's and ITC's Claimed Operating Effectiveness Ignores the Fact that the MI/ON PARs are Operated to Achieve a +/-200MW Control Band

As explained by NYISO witness Yeomans,[444] the MISO-IESO "Operating Instruction" sets forth how MISO and IESO will operate the MI/ON PARs. The Operating Instruction provides a operational target that actual power flows over the MI/ON Interface are to be maintained within a +/-200 MW "Control Band" of the power flows that have been scheduled over the MI/ON Interface to the maximum extent practical.[445] For example, if the scheduled flow is 400 MW from MISO to IESO, the MI/ON Interface flow will be within the Control Band as long as the flow is from MISO to IESO, and it is less than 600 MW, and greater than 200 MW. It should not be particularly difficult for MISO and IESO to maintain the MI/ON Interface flows within the 400MW operating range provided by the +/-200MW Control Band the vast majority of the time.[446] Lake Erie loop flows were within the Control Band in 49.41% of hours over the year ending March 31, 2012[447]; before MISO and IESO even began operating the MI/ON PARs to better conform actual power flows to scheduled power flows.[448]

At times when MI/ON Interface power flows are within the Control Band and are expected to remain within the Control Band, the Operating Instruction does not require MISO and IESO to take additional PAR actions to further reduce Lake Erie loop flow.[449] MISO witness Mallinger explained that "fully mitigate" means "completely manage" Lake Erie loop

[444] Ex. NYI-1 at 11-12.

[445] Ex. NYI-3 at 52 (Section 3.0, first bullet).

[446] Yet MISO and IESO have had limited success keeping Lake Erie loop flow within the Control Band. *See* Sections IX.C and VII.B of this initial brief.

[447] Ex. NYI-1 at 12:16-13:3 (referring to data in Ex NYI-4).

[448] MISO and IESO did not start operating the MI/ON PARs to better conform actual power flows to scheduled power flows until April 5, 2012.

[449] Ex. NYI-3 at 52 (Section 3.0) and 53 (Sections 3.4.1, 3.4.2).

flow to "near zero megawatts."[450] However, operating to achieve the Control Band does not require MISO and IESO to "fully mitigate" Lake Erie loop flow. Because the MI/ON PARs are not operated to achieve near-perfect conformance between actual and scheduled power flows, it is unlikely that the MI/ON PARs will "fully mitigate" Lake Erie loop flow with any frequency.

The MISO operating data in Exhibit NYI-66 shows that, over the April 5, 2012 to July 18, 2012 period, actual power flows measured at the MI/ON Interface were within +/-10 MW of scheduled power flows (*i.e.*, "fully mitigated") in only 3.3% of the 30,121 five minute intervals that MISO recorded. Actual MI/ON PAR operating data confirms that Joint Applicants' claim that the MI/ON PARs will "fully mitigate" Lake Erie loop flow in 74% of hours is vastly overstated.

The studies and examples that ITC witness Ira Shavel included in his rebuttal testimony (Ex. ITC-1) are similarly flawed because they incorporate the inaccurate expectation that the MI/ON PARs will "fully mitigate," to zero, Lake Erie loop flow whenever unscheduled power flows are less than 600 MW, and will reduce Lake Erie loop flow by 600 MW at times when unscheduled power flows exceed 600 MW. Again, MISO and IESO are operating the MI/ON PARs to achieve the +/-200 MW Control Band, they are not operating the MI/ON PARs to "fully mitigate" Lake Erie loop flow.[451]

[450] Tr. 492:24-493:19.

[451] Exhibit NYI-66 shows that MISO and IESO have not done a particularly good job of operating the MI/ON PARs to keep unscheduled power flows at the MI/ON Interface within the +/-200 MW Control Band. If MISO and IESO have been operating the MI/ON PARs to "fully mitigate" Lake Erie loop flow, then their performance has been abysmal. The actual performance of the MI/ON PARs from April 5, 2012 to July 18, 2012 is discussed in Section IX.B of this initial brief.

2. The Joint Applicants' Expectations Regarding MI/ON PAR Operating Effectiveness Do Not Account for PAR Outages

As NYISO witness Yeomans explained in his testimony[452] and demonstrated with a series of exhibits,[453] the ability of the MI/ON PARs to mitigate Lake Erie unscheduled power flows when one or more of the four circuits that comprise the MI/ON Interface are not PAR controlled is severely limited. Mr. Yeomans' example showed that if just one of the four circuits at the MI/ON Interface is not PAR controlled, the PARs on the three remaining circuits would have very limited ability to conform flow to schedule at the MI/ON Interface, and the local system would have to operate near applicable reliability limits in order to provide this limited degree of control.[454] The Joint Applicants did not attempt to rebut this portion of Mr. Yeomans' testimony.

ITC agrees that the Replacement PARs must be operated in conjunction with the Hydro One PARs in order to impact Lake Erie unscheduled power flows.[455] MISO agrees that the MI/ON PARs' ability to mitigate Lake Erie loop flow is significantly reduced when one or more of the MI/ON PARs is out of service.[456] MISO has also admitted that "there have been no studies performed that quantify the effectiveness of the MI/ON PARs for any sub-optimal condition.[457]

When the Replacement PARs entered service, and MISO and IESO began operating the MI/ON PARs to better conform actual power flows to scheduled power flows at the MI/ON Interface, MISO announced that it was not changing its method of calculating interface prices to

[452] Ex. NYI-1 at 31-38.

[453] Ex. NYI-30 through NYI-33.

[454] *See* Ex. NYI-1 at 33:13-34:23; Ex. NYI-33.

[455] Ex. NYI-37.

[456] Ex. NYI-35.

[457] *Id*.

reflect an expectation that the MI/ON PARs would better control Lake Erie loop flow because Hydro One's L4D PAR was out of service.[458] NYISO witness Pike explained that MISO's announcement was an admission that MISO did not expect the MI/ON PARs to be able to effectively conform actual power flows to scheduled power flows at the MI/ON Interface without the L4D PAR in service.[459]

The Joint Applicants' claim that the MI/ON PARs "are expected to fully mitigate Lake Erie loop flows approximately 74% of the time, and reduce them by approximately 600 MW the remainder of the time"[460] assumes that all of the MI/ON PARs will be available 100% of the time. The Joint Applicants' claimed MI/ON PAR operating effectiveness does not account for PAR outages.[461] In Section IX.D of this initial brief, the NYISO reviews the MI/ON PARs' long history of outages. The NYISO also provides evidence that Hydro One has experienced repeated problems with its L4D PAR (one of the MI/ON PARs) since December of 2011.[462] At the hearing on the merits NYISO witness Yeomans testified that the problems that have been reported on Hydro One's L4D PAR could cause that PAR to fail, or even explode.[463] From April 5, 2012 to July 18, 2012 (the period for which NYISO submitted MI/ON PAR operating data in Exhibit NYI-66) at least one MI/ON PAR was out of service on 73 of the 104 days in the period. Estimates of expected MI/ON PAR operating effectiveness must account for expected MI/ON PAR outages.

[458] Ex. NYI-21.

[459] Ex. NYI-46 at 25.

[460] Ex. MSO-Tab E at 19:5-17.

[461] See Ex. NYI-1 at 29:3-12.

[462] Ex. NYI-73.

[463] Tr. 871:2-872:19.

B. The MI/ON PARs Are Not Providing the Loop Flow Control Promised in the Joint Application

1. Wes Yeomans' Direct Testimony

NYISO witness Yeomans' testimony addressed the first month of MI/ON PAR operation (the Replacement PARs entered service on April 5, 2012, the NYISO's testimony was filed on May 11, 2012). Mr. Yeomans' testimony compared how frequently the +/-200MW Control Band was achieved with four of the five MI/ON PARs in service, to how frequently power flows were within the Control Band in 2011 and early 2012, before MISO and IESO began operating the MI/ON PARs to better conform actual power flows to scheduled power flows at the MI/ON Interface. Mr. Yeomans concluded:

> Based on the NYISO's review of one months' operating data with the L4D PAR out of service, it appears that the performance of the [four] available MI/ON PARs has not improved upon the performance that the NYISO recorded for periods when the MI/ON PARs were not available.[464]

The Joint Applicants did not submit rebuttal testimony contesting or refuting Mr. Yeomans' conclusion.

2. Introduction to Exhibit NYI-66

Following the submission of the NYISO's testimony, the NYISO submitted a data request to MISO and obtained data on the operation of the MI/ON PARs covering the period April 5, 2012 to July 18, 2012.[465] The MI/ON PAR operating data that NYISO received from MISO was admitted into the evidentiary record as Exhibit NYI-66.

Exhibit NYI-66 covers 104 days of PAR operation broken down into 30,121 five-minute intervals. For each interval Exhibit NYI-66 provides the following information:

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[464] Ex. NYI-1 at 38:12-15.

[465] April 5, 2012 was the date that the Replacement PARs entered service and MISO and IESO began operating the MI/ON PARs to better conform actual power flows to scheduled power flows at the MI/ON Interface. July 18, 2012 was a day or two after the last day that NYISO was permitted to send discovery requests in this proceeding.

Column One: the date/time, using a 24 hour clock—from interval beginning 00:00 to interval beginning 23:55.[466]

Column Two: MISO's average metered power flow over each five minute interval.[467]

- A positive number represents power flowing from IESO (Ontario) into ITC (MISO). This is also referred to as counter-clockwise power flow.
- A negative number represents power flow from ITC (MISO) into IESO (Ontario). This is also referred to as clockwise power flow.

Column Three: Scheduled interchange between MISO and IESO for each five minute interval.[468]

- A positive number indicates that the power flow is scheduled in a counter-clockwise direction.
- A negative number indicates that the power flow is scheduled in a clockwise direction.

Column Four: The fourth column titled "5 Minute Average Adjusted Loop Flow" is MISO's **measurement of <u>the loop flow that actually occurred</u> in each interval** in real-time.[469]

- A positive number in column four indicates that loop flow is occurring in a counter-clockwise direction.
- A negative number in column four indicates that loop flow is occurring in a clockwise direction.

Column Five: The fifth column, titled "Total PAR Offset" is the MISO's estimate of the impact that the MI/ON PARs had on loop flow in each interval.[470]

- The sign convention for column 5 is the **opposite** of the sign convention used in columns 2, 3, 4 and 6.
    - A positive number in column five indicates that MISO believes the MI/ON PARs were influencing power flows to be in a more clockwise direction.
    - A negative number in column five indicates that MISO believes the MI/ON PARs were influencing power flows to be in a more counter-clockwise direction.[471]

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[466] Tr. 879:6-17.

[467] Tr. 879:17-20.

[468] Tr. 879:25-880:1.

[469] Tr. 880:1-881:5; 882:15-17.

[470] Tr. 881:10-15.

[471] MISO provided its "Total PAR Offset" estimate to the NYISO after the period for requesting discovery had concluded. MISO gave the NYISO a brief oral explanation of how its "Total PAR Offset" estimate was developed. MISO explained that its estimate of the impact that the MI/ON PARs had on Lake Erie loop flow (measured over the MI/ON Interface) in each 5 minute interval takes into account the tap positions of all of the MI/ON PARs and metered flows over the interface. The NYISO was not given an opportunity to review the method that MISO used to

Column Six: The sixth column titled "Actual Loop Flow" is the **MISO's estimate** of what the loop flow would have been if the MI/ON PARs did not exist.[472]

- The loop flow that was actually experienced, from column four, was modified by MISO's estimated "Total PAR Offset" in column five, to arrive at MISO's estimated "Actual Loop Flow" in column six.
- The average actual loop flow that MISO metered in each 5 minute interval is in column four of Ex. NYI-66. Column six is MISO's estimate of what loop flow would have been if the MI/ON PARs did not exist.

Column Seven: The seventh column, called "Tap Move Performed," indicates whether or not one or more taps were moved (changed) on one or more of the MI/ON PARs in the relevant interval (simple yes or no).[473]

- MISO has claimed that the data in this column is Protected Information.

Column Eight: The eighth column identifies the NERC IDC status that MISO and IESO set the MI/ON PARs to.[474]

- The MI/ON PAR status is either "Regulated" or "Non-Regulated."
- In a pleading MISO and IESO submitted to the United States Department of Energy they committed to set the NERC IDC flag to Non-Regulated whenever unscheduled power flows were outside the +/-200 MW Control Band specified in the Operating Instruction, or were expected to be outside the +/-200 MW Control Band specified in the Operating Instruction.[475]
- Setting the NERC IDC flag accurately is important, because it affects the ability of reliability coordinators (NYISO, PJM, MISO and IESO) to use TLR to address reliability concerns at times when the MI/ON PARs are not successfully conforming actual power flows to scheduled power flows. The importance of setting the IDC flag correctly is discussed in Section IX.C of this initial brief.
- MISO has claimed that the data in this column is Protected Information.

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develop its "Total PAR Offset" estimate, or to test the accuracy of the MISO's "Total PAR Offset" estimate. Because MISO employee Kevin Frankeny attested that the information MISO provided was "true and correct, to the best of [his] knowledge, information and belief," the NYISO uses the estimate MISO provided in this initial brief to respond to the Joint Application. The NYISO uses MISO's "Total PAR Offset" estimate as a matter of convenience in this initial brief because the MISO has claimed that the actual tap positions of the MI/ON PARs in each five minute interval that are reported in Exhibit NYI-66 are Protected Information. MISO has not claimed that its "Total PAR Offset" estimate (which appears to be primarily based on the tap positions of the MI/ON PARs) is protected information. The NYISO's use of the "Total PAR Offset" estimate that MISO provided against the Joint Applicants should not be interpreted as indicating that the NYISO agrees to or accepts the accuracy of the untested data that MISO provided for any other purpose

[472] Tr. 881:18-25; 882:7-9.

[473] Tr. 884:7-17.

[474] Tr. 884:21-885:8.

[475] Ex. NYI-10 at 7 ("Taken together, the provisions of the CO2 [Operating Instruction] require that MISO and IESO take actions to regulate loop flow for as long as possible. When that ability is exhausted, and loop flow exceeds (or is expected to exceed) +/-200 MW, the IDC status flag will be set to "Non-Regulate."); *see also*, Ex. NYI-64, Ex. NYI-72 at 2, Tr. 809:16-810:2.

Columns Nine through Twelve: specify the PAR tap position in every 5-minute interval for ITC's B3N PARs (both PARs consolidated into a single entry), the Hydro One PAR on the L4D transmission circuit, the Hydro One PAR on the L51D transmission circuit and the Hydro One PAR on the J5D transmission circuit.[476]

- PAR tap range on the B3N PARs 2-66 (1-33 each). Midpoint (neutral tap) 34.[477]
- PAR tap range on the L4D and L51D PARs 1-66. Midpoint (neutral tap) 34.[478]
- PAR tap range on the J5D PAR 1-35. Midpoint (neutral tap) 18.[479]

Exhibit NYI-66 tells a compelling story about the actual operating effectiveness of the MI/ON PARs in their first 104 days of operation. The "story" can be told in two ways, by tabulating the data MISO provided in various ways to show how the MI/ON PARs operated, or by taking the data for a particular operating day and turning the raw data into a narrative of what happened on that operating day. The NYISO uses both methods to review MISO's Exhibit NYI-66 data below.

3. Review of MISO's Exhibit NYI-66 Data—Tabulation of Operating Data Covering April 5, 2012 to July 18, 2012

The NYISO compiled statistics addressing the MI/ON PARs performance over the 104 days that are addressed in Exhibit NYI-66. The NYISO also compiled data on MISO's and IESO's accuracy in setting the NERC IDC status. The data the NYISO compiled addressing the IDC Status is discussed in Section IX.C of this initial brief.

The NYISO performed its analysis of the Exhibit NYI-66 data in several steps. First, the NYISO used the data in Column Four of the Exhibit NYI-66 data to determine the average, net directional value of loop flow for the period. On average, Lake Erie loop flow was 48 MW in a

[476] Tr. 885:20-886:11.

[477] Tr. 1135:3-5.

[478] Tr. 887:19-21.

[479] Tr. 887:22-23.

counter-clockwise direction over the April 5 to July 18, 2012 period. The data in Column Six of Exhibit NYI-66 (MISO's estimate of what Lake Erie loop flow would have been, but for the operation of the MI/ON PARs) indicated that, if the MI/ON PARs had not been in operation, the average, net directional value of Lake Erie loop flow would have been 85 MW in a counter-clockwise direction. The data in Column Six indicates that, on average the MI/ON PARs blocked 37 MW of counter-clockwise loop flow over the April 5 to July 18, 2012 period. Blocking counter-clockwise loop flow can be detrimental to the NYISO because counter-clockwise loop flow tends to relieve transmission congestion in New York.[480]

The NYISO next used the data in Column Four of Exhibit NYI-66 to calculate the average absolute value of Lake Erie loop flow for the April 5 to July 18, 2012 period. The average absolute value of loop flow for the April 5 to July 18, 2012 period was 214 MW. On average, the absolute value of Lake Erie loop flow was outside the +/-200 MW Control Band specified in the Operating Instruction. This is the first of many statistics suggesting that the MI/ON PARs were not effective in conforming actual power flows to scheduled power flows at the MI/ON Interface.

Of the 30,121 five minute intervals for which data was provided, the Column Four data indicated that loop flow was within the +/-200 MW Control Band in 16,696 intervals, or 55.4% of the total intervals. As Mr. Yeomans explained in his Direct Testimony, for the twelve months ending March 31, 2012 (just before the Replacement PARs entered service) MI/ON Interface flow was within +/-200 MW of the MI/ON Interface schedule in 49.41% of hours.[481] However, for the seven month period commencing July 1, 2011 and ending January 31, 2012 (again, before the Replacement PARs entered service) MI/ON Interface flows were estimated to be within +/-

[480] *See* Section V.C of this initial brief.

[481] Exhibit NYI-1 at 37:15-17; Exhibit NYI-4.

200 MW of MI/ON Interface schedules in 57.5% of hours.[482] In October of 2011, MI/ON Interface flow was within +/-200 MW of the MI/ON Interface schedule in 75.7% of hours.[483] The operation of the MI/ON PARs to better conform flow to schedule at the MI/ON Interface from April 5 to July 18, 2012 does not appear to have reduced Lake Erie loop flow.

The NYISO also checked Exhibit NYI-66 to see if the extremes in Lake Erie loop flow had been moderated by the operation of the MI/ON PARs. From April 5 to July 18, 2012, the highest recorded interval of counter-clockwise loop flow was 1444 MW, which is more than double the MI/ON PARs claimed control capability of 600 MW. The highest recorded interval clockwise loop flow was 864 MW.

Next, the NYISO tested the data in Exhibit NYI-66 Column Four to see how frequently Lake Erie loop flow was "fully mitigated."[484] Based on MISO witness Mallinger's testimony that loop flow is "fully mitigated" when it is "completely managed,"[485] so the NYISO used a +/-10 MW bandwidth to perform its test. Of the 30,121 five minute intervals considered, actual power flows were within +/-10 MW of scheduled power flows in only 1003 intervals, or 3.3% of all intervals. This doesn't even come close to the "fully mitigated in 74% of all hours" claim that MISO witness Mallinger, and many other MISO and ITC witnesses, made in their testimonies.

After testing the validity of the Joint Applicants' claims about how frequently the MI/ON PARs would "fully mitigate" Lake Erie loop flow, the NYISO checked to see how often the MI/ON PARs reduced Lake Erie loop flow by 600 MW or more. Column Four of Exhibit NYI-66 (actual, real-time loop flow) identified 1,047 intervals (3.5 percent of all intervals) in which

[482] Exhibit NYI-1 at 37:19-21; Exhibit NYI-4.

[483] Exhibit NYI-1 at 38:1-2; Exhibit NYI-4.

[484] *See* Section IX.A of this Initial Brief.

[485] Tr. 492:24-493:19.

Lake Erie loop flow was 600 MW or greater. Column five of Exhibit NYI, MISO's estimated "Total PAR Offset," indicates that the MI/ON PARs blocked 600 MW or more of Lake Erie loop flow in only 129 intervals, which was just 0.4 percent of the 30,121 intervals included in Exhibit NYI-66. The Exhibit NYI-66 data indicates that the Joint Applicants' claim that the MI/ON PARs will block 600 MW of Lake Erie loop flow "at all times" is significantly overstated.

Finally, the NYISO reviewed the data from Exhibit NYI-66 to determine when the operation of the MI/ON PARs actually increased the magnitude of Lake Erie loop flow. In order to determine when the operation of the MI/ON PARs actually increased the magnitude of Lake Erie loop flow, the NYISO compared the actual Lake Erie loop flow in column four of Exhibit NYI-66, to MISO's estimate of what Lake Erie loop flow would have been if there were no PARs at the MI/ON Interface in Column Six. When the loop flow in Column Four of Exhibit NYI-66 is greater than the loop flow in Column Six of Exhibit NYI-66 (without regard to the direction of the loop flow in either column), it indicates that the operation of the MI/ON PARs exacerbated Lake Erie loop flow.

The NYISO's comparison indicated that the operation of the MI/ON PARs made Lake Erie loop flow worse in 10,158 five minute intervals, or 33.7 percent of all intervals over the April 5 to July 18, 2012 period. The operation of the MI/ON PARs exacerbated Lake Erie loop flow in 5,613 intervals (18.6 percent of all intervals) during which the actual (Column Four) Lake Erie loop flow was outside the +/-200 MW Control Band. In 1337 intervals (4.4 percent of all intervals) the operation of the MI/ON PARs caused loop flow that was expected to be inside the +/-200 MW Control Band to instead fall outside the Control Band. The data in Exhibit NYI-66 indicates that from April 5 to July 18, 2012 the MI/ON PARs were frequently a cause of additional Lake Erie loop flow.

4. Interpretation of Exhibit NYI-66 Data for Specific Operating Days

a. June 16, 2012 Operating Day

On June 16, 2012 the L4D PAR was out-of-service. The MI/ON PARs showed little ability to control of loop flow with only three of the four interface circuits PAR controlled.[486] The L4D PAR was out of service on this day.[487] The day began with counterclockwise loop flow close to the 200 MW limit of the Control Band. Loop flow bounced into and out of the Control Band from midnight until 1:00 a.m., after which time loop flow remained within the +/- 200 MW control band for almost all intervals until 8:00 a.m.[488]

Shortly after 8:00 a.m., counterclockwise loop flow exceeded the Control Band. Lake Erie loop flow remained outside the Control Band for the rest of the day.[489] MISO and IESO made little effort to move the MI/ON PARs to better conform actual power flows to scheduled power flows at the MI/ON Interface. The MI/ON PARs were only moved in fifteen 5-minute intervals out of 191 5-minute intervals between 8:05 a.m. and 11:55 p.m. None of the PAR moves that MISO and IESO took brought actual power flow significantly closer to scheduled power flow.

In the morning,[490] MISO and IESO placed the MI/ON PARs in "Regulated" mode at a time when loop flow was hundreds of MWs away from achieving the +/-200 MW Control Band.[491] MISO and IESO then left the PARs in "Regulated" mode while the loop flow was well

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[486] Ex. NYI-66 at 551-559.

[487] Ex. NYI-73 at 3 and 6 (the PS4 Hydro One PAR on the L4D line was bypassed on June 10, 2012 and returned to service on June 17, 2012).

[488] Exhibit NYI-66 at 551-554.

[489] Tr. 888:1-10 (corrected).

[490] NYISO is not referencing the specific interval in which the switch to "Regulated" mode was made in order to avoid revealing Protected Information. The relevant interval occurred on page 554 of Exhibit NYI-66.

[491] Ex. NYI-66 at 554 (compare the "IDC Status" column to the "5 Minute Avg Adj Loop Flow" column to identify time intervals when the MI/ON PARs are set to Regulated but loop flow exceeds the +/-200 MW control band).

outside the +/-200 MW control band for more than an hour. MISO and IESO's setting of the Regulated Mode in the NERC IDC was not consistent with the commitments that MISO and IESO made to the DOE in Exhibit NYI-10.

b. July 18, 2012 Operating Day

On July 18, 2012, MISO and IESO actively operated the MI/ON PARs to control loop flow.[492] From 2:50 a.m. until around 10:00 a.m., MISO and IESO operated the PARs reasonably well to conform actual power flows to scheduled power flows within the +/-200 MW Control Band. The MI/ON PARs operation was not precise enough to always maintain loop flow within the Control Band, however when the loop flow started to leave the Control Band, MISO and IESO operated the MI/ON PARs appropriately to compensate.

Lake Erie loop flow changed dramatically between 10:00 and 10:15 a.m.[493] The MI/ON PARs were not able to keep up with the change and, by 10:10 the MI/ON PARs were making loop flow worse, not better.[494] Based on the "Actual Loop Flow" estimate in Column Six of MISO's data, it appears that loop flow would have remained within the +/-200MW bandwidth from 10:10 a.m. until around 11:50 a.m. if the MI/ON PARs had not been in service.[495] The MI/ON PARs were causing approximately 400 MW of additional clockwise flow. According to the data MISO provided, the operation of the MI/ON PARs was pushing loop flows that would have been within the +/-200 MW control band substantially outside the control band in the

[492] Ex. NYI-66. All of the operating data discussed in this section can be found in Ex. NYI-66. Additional citations are included as necessary.

[493] Tr. 899:16-20.

[494] For example, on July 18, 2012 at 10:15 a.m., actual loop flow from Column Four was 337 MW clockwise. The Total PAR Offset in Column Five indicates that the MI/ON PARs were being operated to cause 403 MW of clockwise flow. So, if the MI/ON PARs had not been in service at all, loop flow would have been 65 MW in a counter-clockwise direction. Sixty-five MW of Lake Erie loop flow would have been well within the permitted Control Band. In this case the operation of the MI/ON PARs exacerbated Lake Erie loop flow.

[495] Ex. NYI-66 (the column titled "Actual Loop Flow" is "what the flow would have been had there been no PARs." Tr. 882:21-22).

clockwise direction. MISO and IESO were operating the PARs in a manner that caused **more** Lake Erie loop flow, and that pushed Lake Erie loop flow outside the Control Band.[496]

Starting at approximately 11:40 a.m. MISO and IESO began taking actions to bring loop flow back within the Control Band. Based on the MISO calculated Total PAR Offset term in Column Five of Ex. NYI-66,[497] it took MISO and IESO an hour (until 12:40) to get the MI/ON PARs turned around so that the PARs were actually reducing clockwise flow, rather than exacerbating it. Other periods of high clockwise loop flow occurred over the course of the day. From 14:00 (2:00 p.m.) until 15:15 (3:15 p.m.) loop flow averaged more than 400 MW in the clockwise direction.

Beginning around 17:00 (5:00 p.m.), loop flow became significantly counterclockwise, and again, it took MISO and IESO approximately 45 minutes to get the MI/ON PARs turned back around so that they were not further exacerbating the counterclockwise loop flow that was occurring. Loop flow remains significantly counterclockwise, and outside the +/-200 MW Control Band, from just before 17:00 (5:00 p.m.) until around 21:00 (9:00 p.m.).

Comparing the "IDC Status" column (Column Eight) to the actual loop flow data reported in Column Four, it is apparent that on July 18, 2012 MISO and IESO placed the MI/ON PARs in "Regulated" mode at a time when loop flow was not even close to achieving the +/-200 MW control band.[498] MISO and IESO then left the PARs in "Regulated" mode while the loop flow was well outside the +/-200 MW control band for more than two consecutive hours. MISO and IESO's actions were not consistent with the commitments that they made to the DOE in Exhibit NYI-10.

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[496] Tr. 900:11-18.

[497] Ex. NYI-66 (the column titled "Total PAR Offset" is the calculated contribution to loop flow from the MI/ON PARs Tr. 882:22-24).

[498] *See* Ex. NYI-66 at 794.

The Exhibit NYI-66 data for July 18 demonstrates that operating the MI/ON PARs is more like driving a freight train than it is like driving a Porsche. Operation of the MI/ON PARs requires numerous decisions, each decision takes time and input and actions may be required of several parties (MISO, IESO, ITC, Hydro One). When a decision turns out to be wrong, it takes time to correct because the MI/ON PARs have to be tapped back in the opposite direction. PARs are electro-mechanical devices and constantly tapping them up and down will eventually wear the PARs out, so operators tend to be cautious about taking too many taps.

MISO and ITC claim that the MI/ON PARs will be operated to perfectly match flow to schedule and eliminate 600 MW of loop flow in every hour of every day. Exhibit NYI-66 shows what has actually happened is very different from what the MISO and ITC claim will happen. The hours where 600 MW of loop flow is eliminated are rare. Exhibit NYI-66 actually identifies more than 846 hours between April 5, 2012 and July 18, 2012 when MISO and IESO operate the PARs in a manner that makes loop flow worse, not better.[499]

The NYISO briefly discusses the Exhibit NYI-66 data addressing the June 19, 2012 and July 17, 2012 operating days in Section IX.B.5 of this initial brief.

5. Response to Joint Applicants' Argument that the Operation of the PARs from April 5, 2012 to July 18, 2012 is Not Indicative of Expected Future Efficacy

In Ex. ITC-13, ITC, MISO and IESO employees state "that the performance of the MI-ON PARs since ITC's B3N PARs went into service in early April, 2012 has been well within the normal range for the start up phase of major new electric facilities."[500] The NYISO cannot agree

[499] *See* Ex. NYI-66 (compare the "5 Minute Avg Adj Loop Flow" column to the "Actual Loop Flow" column to identify time intervals when the "5 Minute Avg Adj Loop Flow" value is greater than the "Actual Loop Flow" value).

[500] Ex. ITC-13, Affidavit of Michael Moltane.

with this statement. The operating data shows that MISO and IESO are not consistently trying to operate the MI/ON PARs to control actual power flows to scheduled power flows.[501]

The NYISO would agree that the performance has been within the expected range for a startup facility *if* the operating data showed that MISO and IESO were taking taps on the MI/ON PARs and occasionally under-correcting, overcorrecting or overshooting the bounds of the +/- 200 MW Control Band. However, these are not the sorts of operating problems that the NYISO has identified in its review.

While MISO and ITC are interested in recovering a portion of the cost of the Replacement PARs from NYISO and PJM customers, Exhibit NYT-35 suggests that MISO and ITC are not interested in undertaking a significant effort to ensure that the MI/ON PARs control Lake Erie loop flow to within the 200 MW Control Band that they proposed to the United States Department of Energy. Exhibit NYT-35 states that if operating to achieve the Control Band proves too onerous, MISO, ITC and IESO need to have a way to escape the obligation that they assumed.

MISO's and ITC's lack of interest in actually achieving the Control Band is evident from the data in Exhibit NYI-66. On the limited occasions when it appears that MISO and IESO are really trying to operate the PARs to remain within the Control Band, they can achieve significant success. For example, on July 18, 2012 from 3:00 in the morning until approximately 10:00 in the morning it appears that MISO and IESO actively operated the MI/ON PARs to conform actual power flows to scheduled power flows at the MI/ON Interface. Column Five of Exhibit NYI-66 indicates that the MI/ON PARs were operated to mitigate nearly 700 MW of loop

[501] *See*, Ex. NYI-66.

flow[502] for a period of approximately four hours. Unfortunately, the control that was briefly achieved by actively operating the MI/ON PARs on July 18 has been the exception, not the rule.

Much of the time, the MI/ON PARs are not being operated in the manner that would be necessary to better conform actual power flows to scheduled power flows at the MI/ON Interface. The data in Column Seven "Tap Move Performed" of Exhibit NYI-66 indicates that PAR tap moves only occurred in 1,458 five minute intervals, or 4.8% of the total intervals included in the Exhibit.

On June 19, 2012, there was predictable counter-clockwise Lake Erie loop flow that significantly exceeded the +/-200 MW Control Band for most of the day. The MI/ON PARs were operated to counteract approximately 400 MW of loop flow, but no attempt was made to operate the PARs to achieve the claimed limits of their control capability, or to further reduce Lake Erie loop flow. Only one MI/ON PAR was moved in one five minute interval over the entire day.[503]

On July 17, 2012 the L4D PAR was out of service. Counter-clockwise loop flow was extremely high that day. Over the course of the day, there were only two PAR tap moves taken, despite the loop flow being outside the +/-200 MW control band for the entire day. For much of the day, the MI/ON PARs were slightly exacerbating (by up to 24 MW) the high Lake Erie loop flow that was occurring. Although MISO claims that 300-350 MW of loop flow can be mitigated with three of the four MI/ON circuits controlled,[504] Column Five of Exhibit NYI-66

[502] Exhibit NYI-66 indicates that the MI/ON PARs blocked 600 MW or more of Lake Erie loop flow in only 129 intervals, which was just 0.4 percent of the 30,121 intervals included in the Exhibit.

[503] Ex. NYI-66 at 579.

[504] *See* Ex. NYI-35 at 2 ("MISO believes that with the Hydro One L4D PAR out of service, overall capacity to reduce loop flows will decline so MISO would expect the MI/ON PARs to fully mitigate loop flows 40-50% of the time. However, the MI/ON PARs will still be able to mitigate Lake Erie loop flows by approximately 300-350 MW.").

"Total PAR Offset" indicates that on July 17 the PARs were **never** operated to reduce Lake Erie loop flow.[505] On July 17 MISO and IESO either could not, or would not, take additional taps on the MI/ON PARs to better conform actual power flows to scheduled power flows at the MI/ON Interface.

Section 3.0 of the MISO/IESO Operating Instruction states "The PARs shall be operated such that: The Interface Deviation is maintained within the Control Band to the maximum extent practical considering operational feasibility, safety, equipment limitations and regulatory and statutory requirements…" On June 19, 2012 and July 17, 2012 it is not clear from the MISO data contained in Exhibit NYI-66 whether the MI/ON PARs had reached the limits of their control capability, or if the operators chose not to actively operate the MI/ON PARs to better control Lake Erie loop flow, in violation of the requirements of the Operating Instruction. The MI/ON PARs should have been able to provide additional loop flow control on those days, based on MISO's claims that the MI/ON PARs will provide 600 MW offset of potential loop flows almost all of the time,[506] and can provide 300-350 MW of control when one of the four circuits on the MI/ON Interface is not PAR controlled.[507]

The NYISO cannot accept MISO's, ITC's and IESO's claims that the MI/ON PARs are performing as expected. The data in Ex. NYI-66 shows otherwise.

C. MISO's and IESO's Failure to Timely Set the "Regulated/Non-Regulated" Flag in the NERC Interchange Distribution Calculator Can Delay or Prevent NYISO's Ability to Use TLR to Resolve Reliability Issues at Times When the MI/ON PARs Are Not Successfully Mitigating Unscheduled Power Flows

TLR is a procedure that Reliability Coordinators like the NYISO, MISO, IESO and PJM use to address power flows that are causing reliability impacts on their transmission systems. It

[505] Ex. NYI-66 at 786-794.

[506] Ex. MSO-Tab E at 19:5-17.

[507] Ex. NYI-35 at 2.

permits Reliability Coordinators to request the curtailment or removal of inter-Control Area transactions that have a substantial impact on a particular transmission constraint that presents a reliability risk.[508] TLR is implemented via the North American Electric Reliability Corporation's ("NERC's") Interchange Distribution Calculator ("IDC"). The IDC is a database that identifies inter-Control Area transactions that have a 5% or greater impact on the transmission constraint that TLR is being requested to address.[509] The IDC identifies proposed pro rata reductions to all of the transactions that have a 5% or greater impact on the transmission constraint to achieve the requested level of relief. The IDC transmits the pro rata transaction reductions to each of the Balancing Authorities that are participants in the transactions that need to be curtailed or removed to provide the requested relief.[510]

The MI/ON PARs are subject to a modeling treatment in the NERC IDC that is different from all of the other PARs that surround Lake Erie. At times when MISO and IESO set the MI/ON PARs to be "regulated" in the NERC IDC model, that model assumes that there is no Lake Erie loop flow, whatsoever, crossing the MI/ON PARs, so no power flows will be seen as crossing the MISO/IESO border and potentially causing a 5% or greater impact.[511] In other words, the IDC model will represent power flows as conforming to schedules, without regard to what is actually happening in the real world.[512] At times when the MI/ON PARs are set to "non-regulated," Lake Erie loop flow is permitted to flow across the MI/ON interface in the NERC IDC model, and transactions at that interface are available to be removed via TLR in order to address reliability concerns that Lake Erie loop flow is causing or aggravating in New York,

[508] Ex. NYI-1 at 5:16-23.

[509] Ex. NYI-1 at 6:3-17.

[510] Ex. NYI-1 at 6:10-15.

[511] Tr. 835:21-25.

[512] Ex. NYI-1 at 8:14-20.

PJM, MISO or IESO.[513] All other PARs around Lake Erie are currently modeled in the IDC as "non-regulated" at all times, so transactions scheduled over those PARs remain available to be removed in order to provide TLR relief.

MISO and IESO are responsible for determining if Lake Erie loop flows are within the +/-200 MW "control band," and are expected to remain within the +/-200 MW control band, and for accurately setting the IDC mode to "regulated" or "non-regulated" on that basis.[514] It is very important for MISO and IESO to timely and accurately reflect the correct scheduling mode for the MI/ON PARs in the NERC IDC. When the IDC flag is set to "regulated," this blocks the ability of NYISO and PJM (and other control areas) to use TLRs to remove transactions that are adversely impacting reliability.[515]

The NYISO used the data in Exhibit NYI-66 to review how accurately and timely MISO and IESO have been performing this important duty that has reliability implications. In particular, the NYISO compared the actual loop flow in Column Four of Ex. NYI-66 to the "IDC Status" in Column Eight of Ex. NYI-66. The NYISO expected to find that when the Lake Erie loop flow in Column Four was less than 200 MW, the IDC Status flag would be set to "Regulated." When the loop flow in Column Four exceeded 200 MW (regardless of direction) the NYISO expected to find the IDC Status flag set to "Non-Regulated." However, that is not what the NYISO found.

Considering only the days on which there was at least one change made to the IDC Status in Ex. NYI-66 (in order to address certain infirmities in the data that the MISO provided[516]), the

[513] Tr. 835:9-836:5.

[514] Ex. NYI-10 at 7; Ex. NYI-64 at 2; Ex. NYI-72 at 2.

[515] Ex. NYI-1 at 8:22-9:2.

[516] *See* Tr. 893:18-894:14.

NYISO found that 28.6 percent of the time that MISO and IESO set the flag to "Regulated," it is set incorrectly. Column Four indicates that Lake Erie loop flow is in excess of 200 MW, yet MISO and IESO have set the IDC Status to "Regulated."

MISO's and IESO's lack of diligence in setting the IDC Status of the MI/ON PARs could have significant adverse reliability consequences for the NYISO, and for other potentially impacted Control Areas. It is not acceptable for MISO and IESO to set the IDC status flag to "Regulated," then wait for other Reliability Coordinators to call and complain. This causes delay that prevents timely resolution of reliability issues. It would be unjust and unreasonable for NYISO and PJM to be charged for costs of the Replacement PARs when MISO's and IESO's failure to timely and accurately implement their MI/ON PAR operating responsibilities can prevent the NYISO, PJM, and other Reliability Coordinators from timely addressing reliability issues arising in their Control Areas.

D. The MI/ON PARs Outage History, Including Recent Problems with Hydro One's L4D PAR

NYISO witness Yeomans reviewed the outage history of the MI/ON PARs from 2001 through May 11, 2012 in his direct testimony.[517] Because ITC, Detroit Edison and IESO were not able to provide historical data on MI/ON PAR outages, Mr. Yeomans instead reviewed a number of NERC, NPCC and other similar third-party reports[518] that were used to develop reliability planning cases, and that discuss outages of the MI/ON PARs during that period because the outage facilities needed to be represented as unavailable in the planning cases. Exhibit NYI-11 summarizes the reports Mr. Yeomans relied on, which show that the history of the MI/ON PARs indicates that they are prone to failure.

[517] Ex. NYI-1 at 23-27.

[518] These reports are attached to Mr. Yeomans' testimony (Exhibit NYI-1) as Exhibits NYI-12, -13, -14, -15 (at p. 40), -16 (at pp. 34-35), -17 (at p. 21), -18 (at p. 24), -19 (at p. 25), -20 through -23, and -24 (at p. 22).

From 2003 to April 5, 2012, the MI/ON PARs were physically bypassed much of the time and were not ordinarily being operated to regulate power flows.[519] Given the MI/ON PARs operation mode, it is not surprising that the PARs service record was better than average during this time period.

On April 10, 2003, ITC's Chief Executive Officer sent an e-mail discussing the then-recent failure of the Original PAR. Mr. Welch's e-mail said "it appears that *these devices* are nothing but junk."[520] ITC chose a different manufacturer for its Replacement PARs than the manufacturer that constructed the Original PAR.[521] However, Hydro One's L4D and L51D PARs were constructed by the same manufacturer as the Original PAR, and they are of the same approximate vintage as the Original PAR was.

Hydro One has been experiencing repeated problems with its L4D PAR. When the Replacement PARs were placed into service on April 5, 2012, the L4D PAR was out-of-service due to a forced outage that began on December 17, 2011.[522]

Data responses provided by IESO indicate that problems with the MI/ON PARs have continued in the 2011-2012 timeframe. On December 17, 2011, the L4D PAR went out of service and did not return to service until June 1, 2012, due to a "gas accumulation alarm."[523] The reason for the outage was also described by IESO as a "bad oil sample."[524] In addition:

- The L4D PAR was bypassed on June 10, 2012 due to another "gas accumulation alarm," and returned to service on June 17 at 13:16; and

[519] Tr. 873:8-19.

[520] Exhibit NYI-29 (emphasis added).

[521] Ex. NYI-1 at 30-31. *See also* Ex. NYI-27 through NYI-29.

[522] Ex. NYI-1 at 27-29; Ex. NYI-20.

[523] Exhibit NYI-73 at 1.

[524] Exhibit NYI-20.

- The L4D PAR was bypassed on July 12, 2012 at 21:28 p.m. due to a "gas accumulation alarm," and returned to service on July 18 at 00:54 a.m.[525]

At the hearing, NYISO witness Yeomans explained gas accumulation/bad oil sample issues that arise with PARs:

> On transformers and PARs, there are devices that can sense for gas developing inside of the device so it can be inside a transformer or inside a PAR and these alarms are important. These sensors are important and it sends alarm to operators who know to quickly take that device out of service.
>
> Inside the transformer or the phase angle regulator are these very large copper coils that are immersed in oil. If you have a break in the coil or a bad connection or the start of a break, anything where you start to get possibly arcing or flashing or the electricity jumping across that gap, this is submersed in oil. The oil gets hot and it bubbles.

Mr. Yeomans went on to explain that gassing and bad oil samples present a very serious concern:

> When the bubbles quite frankly pop at the top, the gas is released in the very top of the transformer where there's an air gap, the sensor senses the gas and asset owners and operators know that's a dangerous situation, dangerous in a couple ways.
>
> First of all, you may have a fault or disconnection or arcing inside the transformer. You have oil overheating and boiling. You have pressure building up, so you have the danger of an explosion or just the information that it appears there's something wrong on the inside of that device.[526]

In light of the serious and recurring nature of this issue affecting the L4D PAR, there is a heightened risk of outage of that Hydro One PAR. If the L4D PAR is removed from service, one of the four circuits at the MI/ON Interface will not be PAR controlled. As the NYISO explains in Section IX.A.2 of this initial brief, the MI/ON PARs have little ability to control loop flow when one of the four circuits that comprise the MI/ON Interface is free-flowing. As Section VIII of this initial brief explains, MISO and ITC propose to continue to charge the NYISO's customers for the undefined "service" that the MI/ON PARs are expected to provide, without

[525] Exhibit NYI-73.

[526] Tr. 871:25-872:10.

regard to the availability of the MI/ON PARs, or the actual ability of the PARs to conform actual power flows to scheduled power flows at the MI/ON Interface.

The MI/ON PARs will experience outages. When one or more of the MI/ON PARs is out-of-service, the MI/ON PARs' ability to conform actual power flows to scheduled power flows at the MI/ON Interface will be limited. The Joint Applicants' failure to address the possibility of a MI/ON PAR outage in the proposed tariff revisions is one of many reasons that their proposed charge to the NYISO's customers is unjust and unreasonable.

E. ITC and MISO Have Indicated a Lack of Commitment to Operate the MI/ON PARs In the Manner Called For in the Operating Instruction and in Representations to the DOE

The September 9, 2011 e-mail from ITC to MISO provided as Exhibit NYT-35 indicates a lack of commitment by MISO and ITC to operating the MI/ON PARs to achieve the +/-200 MW Control Band called for in the Operating Instruction that MISO and IESO presented to the DOE in the Presidential Permit proceeding.[527] In Exhibit NYT-35, Mr. Moltane of ITC states that he is "greatly concerned over the apparent volatility of the loop flow" shown in the August 2011 loop flow data. He goes on to state:

> As you know ITC's concurrence with 200Mw Deadband was based on the assumption and MISO study that the PARs would only have to be moved a limited amount of time. If I am reading this graph correctly, both MISO and ITC would have had to have a dedicated employee doing nothing but moving the PARs all month….
>
> At this point, I am not suggesting changing anything as we are at a critical point in the negotiations with our external partners. However, we will need to figure out some criteria for changing the deadband or methodology if we end up having to move these things as frequently as this chart indicates. *We need to absolutely ensure that we have the flexibility to change the operation if this becomes onerous on MISO, ITC and IESO.*[528]

[527] *See* Ex. NYI-3 at 50 of 63 to 59 of 63.

[528] Exh. NYI-35 (emphasis added).

Throughout this proceeding, MISO and ITC have repeatedly claimed that they intend to operate the MI/ON PARs to conform actual power flows to scheduled power flows at the MI/ON Interface in order to "fully mitigate" Lake Erie loop flow whenever it is less than 600MW, and to reduce Lake Erie loop flow by 600 MW at all other times.[529] Exhibit NYI-35 indicates that ITC and MISO may not be strongly committed to achieving this operating goal.

As Section VIII of this initial brief explains, the Joint Applicants' proposed tariff revisions do not require MISO and ITC to "fully mitigate" Lake Erie loop flow whenever it is less than 600MW, and to reduce Lake Erie loop flow by 600 MW at all other times. The Joint Applicants' proposed tariff revisions do not require MISO and ITC to maintain power flows within the +/-200 MW Control Band specified in the Operating Instruction. The Joint Applicants' proposed tariff revisions do not require MISO and ITC to do *anything*, or to achieve *any* operating target in order to get paid for the Replacement PARs.

Exhibit NYI-35 indicates that MISO and ITC may not be committed to actually achieving the operating targets that they boldly propose in the Joint Application and their supporting sworn testimony. In light of the evidence elicited in this proceeding, it would be unjust and unreasonable to require New York customers to pay for a portion of the cost of the Replacement PARs.

X. WHETHER, IF THE COSTS OF THE ITC PARS ARE ALLOCATED TO PJM, THE COST RESPONSIBILITY ASSIGNED TO PJM BY MISO'S JANUARY 2012 TESTIMONY, WHICH INCREASES PJM'S ALLOCATION ABOVE THE AMOUNT ALLOCATED BY THE JOINT APPLICATION, MAY BE IMPOSED ON PJM?

The NYISO takes no position on this issue.

[529] *See, e.g.*, Ex. MSO Tab-E at 19:9-12.

XI. WHETHER, IF THE COSTS OF THE ITC PARS ARE ALLOCATED TO PJM OR NYISO, PJM OR NYISO IS RESPONSIBLE (RESPECTIVELY) FOR PAYING MISO IN THE CASE OF A PJM OR NYISO CUSTOMER'S FAILURE TO PAY PARS-RELATED CHARGES?

The NYISO expects to supports PJM's position on this issue. NYISO will confirm its support for PJM's position in its Reply Brief.

XII. CONCLUSION

For the reasons set forth herein, the NYISO requests the rejection of the Joint Application in its entirety.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Commission Secretary in these proceedings.

Dated at Washington, DC this 16th day of October, 2012.

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APPENDIX

NYISO'S STATEMENT OF CASE AND PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

STATEMENT OF CASE

The NYISO's statement of the case is the first section of the initial brief, which is incorporated herein by reference.

PROPOSED FINDINGS OF FACT

1. Joint Applicants have failed to provide any evidence to support the justness and reasonableness of applying rates of return on equity and capital structure that were established in 2003 to new customers for new types of charges (initial brief at § I.D, Tr. 90:23-91:1).

2. Joint Applicants have failed, as admitted by Mr. Grover, to justify the rate and time period for depreciation of the Replacement PARs (initial brief at § I.D, Tr. 93:23-95:4).

3. MISO and ITC have not identified any customer or contractual relationship with either NYISO or its customers that present a valid basis for assessing the NYISO or its customers charges for the costs of the Replacement PARs. (initial brief at § III.A; Ex. NYI-5; Ex. NYI-6; Tr. 92:17-25, 91:14-18)

4. MISO and ITC have disclaimed any service obligation to NYISO and PJM and their customers. (initial brief at § III.A; NYI-6; NYI-9)

5. The costs of the Original PAR and the Replacement PARs were incurred due to contract obligations that Detroit Edison and ITC voluntarily assumed. (initial brief at § III.B.1; Ex. NYI-46 at 3:20-4:15; Ex. NYI-48; NYI-46 at 4:7-9; NYI-48 at 9; Tr. 142:12-146:4; Ex. ITC Tab F at 5:8-6:34; Ex. NYI-48 at 3; Ex. NYI-53; Ex. NYI-54)

6. The costs of the Original PAR and the Replacement PARs were incurred to serve the interests of Michigan and Ontario utilities and their electricity customers. (initial brief at § III.B.2; Ex. NYI-48 at 1; Ex. ITC Tab F at 4:21-5:3; Ex. NYI-46, at 10:6-10:10, 10:14-21, 10:14-11:5; Ex. NYI-56 at 1, 2-3; Ex. NYI-58; Ex. NYT-38; Ex. NYI-60)

7. The Original PARs and the Replacement PARs enhance import capability into Michigan, from the North over the MI/ON Interface and from the South. (initial brief at § III.B.2, Ex. NYI-56, Ex. NYT-38)

8. Neither the Original PAR nor the Replacement PARs were planned jointly with PJM and NYISO. (initial brief at § III.D; Ex. NYI-38 at 20:7-21:14; Ex. NYI-44 at 39, 16, 15)

9. MISO never asked or invited the NYISO to discuss the design, costs or cost allocation for the Replacement PARs (as part of MISO's MTEP06 process, or otherwise). (initial brief at § III.D; Ex. NYT-10 at 1)

10. NYISO has never participated in MISO's MTEP planning process. (initial brief at § III.D; Ex. NYI-45 at 1)

11. MISO did not perform a coordinated study with PJM to approve the Replacement PARs project. (initial brief at § III.D, Ex. NYT-2 at 1)

12. There was no postage stamp rate in place for allocating costs across the combined Midwest ISO-PJM-NYISO region in 1998, when Detroit Edison assumed a contractual obligation to construct the Original PAR, or in 2007, when ITC assumed a contractual obligation to construct the Replacement PARs. (initial brief at § IV.A; Ex. NYI-48, NYI-49)

13. ITC did not ask the NYISO to contribute to the cost of the Replacement PARs until after it had already begun constructing the Replacement PARs. (initial brief at § IV.A; Ex. NYT-11 at 1)

14. The costs of the Replacement PARs did not qualify for region-wide cost sharing as a baseline reliability project in MTEP06, and costs were allocated to ITC's customers instead (initial brief at § IV.A; Tr. 305:19-23; Ex. PJM-9 at 1 (Table 1.4-3 to the MTEP06 report; Ex. NYI-51 at 19)

15. MISO treated the Replacement PARs as existing facilities for purposes of the MTEP planning process and for purposes of cost allocation within MISO because the Replacement PARs are like for like replacements for the Original PAR. (initial brief at § IV.A; Ex. PJM-11)

16. MISO has repeatedly determined that, within the MISO region, the cost of the Replacement PARs should not be reallocated to customers outside the ITC transmission zone. (initial brief at § IV.A, Ex: NYT-2 at 4;

17. ITC first suggested to the Commission that NYISO and its customers should share in the costs of the PARs in August 2009, and did not approach NYISO about it until October or November of 2009. (initial brief at § IV.A*; ITC's Answer In Opposition to Request for Clarification*, Docket No. ER08-1281-000 at 3 (August 31, 2009); Ex. S-4 at 13, 25-26)\

18. ITC moved forward with the construction of the Original PAR and the Replacement PARs without any assurance that the Replacement PARs were candidates for multi-regional cost-sharing. (initial brief at § IV.A; Ex. S-4 at 25)

19. ITC proposed and MISO approved the construction of the Replacement PARs in the MTEP06. (initial brief at § IV.A; Ex. NYI-50, NYI-51)

20. ITC signed a contract with Hydro One that obligated ITC to construct the Replacement PARs, at its own expense, in 2007. (initial brief at § IV.A; Ex. NYI-49 at 10, 12 (§§ 6.1.1 and 10.3))

21. The first of the two Replacement PARs was delivered in October 2008, and the second was delivered in the fall of 2009. Both had been installed by December 2009. (initial brief at § IV.A; Ex. S-3 at 6; Ex. S-4 at 25)

22. The Replacement PARs cannot be distinguished from other transmission facilities that provide extra-regional benefits, the costs of which are recovered through license plate rates. (initial brief at § IV.A.; Ex. NYI-1 at 39-40)

23. MISO's DFAX analysis indicates that the IESO region's generation-to-load flows are the single largest contributing factor to Lake Erie loop flows, and that IESO's generation-to-load contribution causes more than half (55%) of all Lake Erie loop flow. (initial brief at § IV.C; Ex. MSO-Tab D at 32:4-6; Tr. 343:2-4)

24. The Joint Applicants provided no evidence to show the costs of the Hydro One PARs or their proportionality to the share of Replacement PARs costs that the DFAX method would assign to IESO's customers, and a MISO witness stated he had no knowledge regarding the amount of the revenue requirement or investment for the Hydro One PARs or how Hydro One's investment in the Hydro One PARs compares to ITC's revenue requirement for the Replacement PARs. (initial brief at § IV.C; Tr. 345:24-346:8)

25. The PARs at the PJM/New York border and other PARs in the Eastern Interconnection mitigate Lake Erie loop flows when they are being actively operated to better conform actual power flows to scheduled power flows. (initial brief at § IV.C; Ex. NYI-38 at 21:20-25:10)

26. If the other PARs in the Eastern Interconnection were removed from service, Lake Erie loop flow would be substantially higher than it is today. (initial brief at § IV.C; Ex. NYI-38 at 25:4-10)

27. The Replacement PARs do not provide unique benefits that no other PARs can provide. (initial brief at § IV.C, Ex. NYI-1 at 40:10-18; Ex. S-5 at 10-12; Ex. MSO-3 at 16, n. 14)

28. The Joint Applicants refused to give NYISO and PJM a financial credit for the costs they incurred to design and implement the "Broader Regional Markets" initiatives that are designed to control or mitigate the effects of loop flow. (initial brief at § IV.C; Tr. 351:22-352:1; Ex. NYI-46 at 15:3-18:22)

29. The DFAX study appropriately does not limit its study of generation-to-load flows occurring within MISO to those occurring within the ITC zone. Instead, the DFAX study includes and calculates participation factors for all MISO generation and loads, regardless of their location. MISO Transmission Owners and customers located outside the ITC zone contribute to Lake Erie loop flow. (initial brief at § IV.D; Ex. MSO-1B; Tr. 561:2-5)

30. The ultimate decision-making authority under the Operating Instruction rests with MISO and IESO in every case. (initial brief at § IV.E; Ex. NYI-1 at 20:13-17)

31. There is no provision in the Operating Instruction that permits NYISO or PJM to request MISO and IESO to operate the MI/ON PARs to prevent emergencies in New York or PJM. (initial brief at § IV.E; Ex. NYI-3 at 50-59 (§ 3.4.2 of instruction))

32. A more restrictive set of rules applies to operating the MI/ON PARs to address emergencies that occur in the NYISO or PJM territories compared to the rules that apply to operating the MI/ON PARs to address emergencies in MISO or IESO. (initial brief at § IV.E; Ex. NYI-3 at 50-59 (§ 3.5.2 of instruction))

33. The Operating Instruction provides for MISO and IESO to suspend normal operation of the MI/ON PARs to protect MISO and/or IESO customers in the event of unexpected operational or market outcomes in their regions, but does not provide corresponding protection for NYISO or PJM customers in the event of unexpected operational or market outcomes in their regions. (initial brief at § IV.E; Ex. NYI-3 at 50-59 (§ 4.0 of instruction))

34. Proposed Attachment SS-1 to the MISO tariff allows MISO to temporarily suspend normal operations of the MI/ON PARs in the event of anomalous MISO market results related to the MI/ON PARs, but does not provide for similar potential suspension of the MI/ON PARs for anomalous market results related to the PARs in NYISO or PJM markets. (initial brief at § IV.E; Ex. MSO-Tab H; Tr. 202:8-13)

35. The tariff revisions that MISO submitted with the Joint Application, including proposed Attachment SS-1, require MISO to continue charging NYISO and PJM customers for the cost of the Replacement PARs, even when their operation has been suspended to address a market anomaly or reliability issue in the MISO or IESO markets. (initial brief at § IV.E; Ex. NYI-7, NYI-8, NYT-30, NYI-65; Tr. 201:1-5)

36. The Broader Regional Markets rules that the ISOs and RTOs are developing will tend to reduce Lake Erie unscheduled power flow or permit the ISOs and RTOs to mitigate the impacts on unscheduled Lake Erie power flows at a lower overall cost. (initial brief at § IV.E; NYI-46 at 15-18)

37. The Joint Applicants view the Replacement PARs as a reliability project, and therefore their cost allocation is not based on a "beneficiary pays" theory. (initial brief at § V.A; Ex. MSO-1 at 19:10-12)

38. The proposed cost allocation is based on a DFAX study that uses a reliability planning approach. (initial brief at § V.A; Tr. 408:24-409:2)

39. MISO did not perform a study using production cost models. (initial brief at § V.A; Tr. 409:8-17)

40. MISO did not perform a study of the "benefits" of the Replacement PARs to NYISO or PJM. (initial brief at § V.B; Tr. 409:8-17)

41. ITC did not create any documents relating to the economic and reliability benefits of the Replacement PARs. (initial brief at § V.B; Ex. NYT-44)

42. Neither MISO nor ITC performed an assessment or studies to identify specific reliability criteria that are potentially violated by Lake Erie loop flow. (initial brief at § V.B; Ex. PTO-4, PTO-5)

43. New York could benefit when: (a) the MI/ON PARs are operated to reduce clockwise loop flows, and (b) components of the New York State Transmission System ("NYSTS") that are substantially affected by unscheduled Lake Erie power flows are constrained. (initial brief at § V.C; Ex. NYI-46 at 21-22; Ex. NYT-19, at 7:131-13).

44. New York may be "harmed" by the operation of the MI/ON PARs when (x) the MI/ON PARs are operated to reduce counterclockwise loop flows, and (y) components of the NYSTS that are substantially affected by unscheduled Lake Erie power flows are constrained, or would become constrained in the absence of counter-clockwise Lake Erie loop flow. (initial brief at § V.C; Ex. NYI-46 at 22; Ex. NYT-19, at 7:131-133)

45. Lake Erie loop flow has predominantly flowed in a counter-clockwise direction in 2012. (initial brief at § V.C; Ex. NYI-66; Tr. 1039:13-14)

46. Counterclockwise Lake Erie loop flow tends to relieve transmission congestion in New York. (initial brief at § V.C; Tr. 996:4-14)

47. In 2012, the MI/ON PARs have operated to block counterclockwise Lake Erie loop flow. (initial brief at § V.C; See NYI-66 (the average Lake Erie loop flow between April 5, 2012 and July 18, 2012 would have been 85 MW counterclockwise if the MI/ON PARs had not been in service).

48. MISO's DFAX analysis projects that generator-to-load contributions to Lake Erie loop flows will continue to tend to be counterclockwise into the mid-term future. In all three of the DFAX cases, peak, shoulder peak, and light load, the projected generator-to-load contributions are counterclockwise in direction. Contributions are projected to be significantly counterclockwise in the peak and shoulder peak cases. The net contributions of the four participating ISO/RTO regions (MISO, NYISO, PJM, IESO) result in an overall counterclockwise participation on the MI/ON Interface. (initial brief at § V.C; Ex. MSO-1B)

49. MISO analysis from 2005 documented the reliability benefits to the ITC service territory from the restoration of the B3N circuit. (initial brief at § V.D.2; Ex. PJM-15 at 4)

50. MISO also concluded in 2005 that replacing the Original PAR was beneficial to the reliability of the ITC system. (initial brief at § V.D.2; Ex. NYI-60 at 2)

51. The MTEP06 report in which the Replacement PARs project was approved by MISO includes a substantial list of reliability benefits to the ITC system provided by the Replacement PARs and the restoration of the B3N circuit that are not also provided to the

NYISo or PJM transmission systems. (initial brief at § V.D.2; Ex. NYI-50 at 19; Ex. NYI-60 at 2)

52. MISO identified, in MTEP06, a basic threshold of reliability needs driving the need for the Replacement PARs, and stated that if the seven needs identified in the MTEP06 list of reliability benefits to the ITC system did not exist, there would be no need for the Replacement PARs. (initial brief at § V.D.2; Tr. 354:4-19; Tr. 355:8-11)

53. The Joint Applicants have not shown that loop flow caused any of the ITC system reliability issues identified in the MTEP06 report. (initial brief at § V.D)

54. Other regions are shielded from NYISO unscheduled power flows (and the NYISO is shielded from their unscheduled power flows) by a string of PARs, Direct Current transmission lines, and a Variable Frequency Transformer controlled transmission line, that are all located on the eastern portion of the NYISO/PJM border, between the load centers of New York City and Northern New Jersey. (initial brief at § V.E; Ex. NYI-38 at 24:5-9)

55. Other PARs in the Eastern Interconnection affect Lake Erie loop flow, including the PARs located in New York and in New Jersey at the NYISO/PJM border, PARs located in Ontario at the NYISO/IESO border and PARs located within New York City. (initial brief at § V.E; Ex. NYI-38 at 7:10-12 and n.1)

56. The very same sets of PARs that shield the MI/ON Interface from power flows associated with serving New York City and Long Island load likely reduce PJM's measured flows over the MI/ON Interface as well. The loop flow reduction benefits that the PARs located in New York and PJM provide are the same benefits MISO claims its MI/ON PARs will provide to New York and PJM customers. The MI/ON PARs are not unique in this regard. (initial brief at § V.E; Ex. NYI-38 at 24:16-17, 24: 17-20; NYI-1 at 40:16-18)

57. The operation of the MI/ON PARs from April 5, 2012 through July 18, 2012 increased the magnitude of Lake Erie loop flows in 33.7% of intervals during that time period. In 18.6% of intervals, the operation of the MI/ON PARs increased the magnitude of loop flows either at a time when loop flows were already outside the +/-200 MW control band, or the operation of the MI/ON PARs actually caused Lake Erie loop flow to exceed the +/-200 MW control band. (initial brief at § V.E; Ex. NYI-66, columns four, five and six)

58. From April 5, 2012 to July 18, 2012, the MI/ON PARs have been operating to conform actual power flow to scheduled power flow at the MI/ON Interface. The average absolute value of actual Lake Erie loop flow over the April 5, 2012 to July 18, 2012 period was 214 MW, which is significantly more than the 0 MW loop flow assumed in MISO's DFAX study. (initial brief at §§ V.E, IX.B; Ex. NYI-66 (data in Column Four, which is MISO's measurement of the loop flow that actually occurred in each interval in real-time)

59. ITC's incurrence of the costs of the Replacement PARs was "caused" by ITC's unilateral decision to assume a contractual obligation to install the replacement PARs in ITC's

2007 Facilities Agreement with Hydro One. (initial brief at § V.F; Ex. PTO-4 at 2-3; Ex. PTO-5)

60. The Joint Applicants submitted no evidence showing that problems caused by Lake Erie loop flow required ITC to restore the B3N circuit and construct the Replacement PARs, and MISO and ITC never performed an assessment or identified specific reliability criteria that are potential violated by Lake Erie loop flow. (initial brief at § V.F; Ex. PTO-4 at 2-3; Ex. PTO-5; Ex. PJM-16)

61. ITC decided to execute the 2007 Facilities Agreement only after it considered all other options, and evaluated the expected benefits to the ITC system. Among the options considered were: not restoring the B3N circuit at all, finding the least expensive way to support needed ITC import capability, and strengthening ITC's ties to its South. (initial brief at § V.F; Ex. NYT-38)

62. The Joint Applicants have failed to submit evidence showing the NYISO's *actual* contribution to Lake Erie unscheduled power flows. (initial brief at § VI.A)

63. The Joint Application fails to recognize and provide a financial credit, as it should, because NYISO and PJM have installed and paid for their own PARs and other controllable facilities (including direct current converters and variable frequency transformers) that reduce Lake Erie loop flow. (initial brief at § V.F; Ex. NYI-38 at 21:20-25:10)

64. The Joint Application proposes not to charge IESO because Hydro One customers paid the costs of the Hydro One PARs. (initial brief at § IV.C)

65. The MISO's DFAX analysis should have included all 8,760 hours of the year, rather than relying on three representative hours. (initial brief at § VII.A.1; Tr. 368:16-22; Tr. 373:4-21; Ex. NYI-38 at 15:21-16:2; Tr. 399:15-400:5)

66. The use of just three load blocks penalizes New York by mis-assigning a significant portion of the NYISO's flow participation to higher load hours, and over-counting the MWh used to determine the New York portion of the DFAX cost allocation. (initial brief at § VII.A.1; Ex. NYI-38 at 14:20-15:19)

67. The use of only three representative load blocks cannot accurately depict a region's expected electricity usage over the 8,760 hours of a year. (initial brief at § VII.A.1; Ex. NYI-38 at 14:12-18)

68. Each region's electricity usage varies significantly more than is captured in the three representative load blocks used in the DFAX analysis. (initial brief at § VII.A.1; Ex. NYI-39)

69. The slope of each ISO/RTO region's load duration curve, as shown in Exhibit NYI-39, depicts how significantly each region's electricity usage varies over the hours of a year. The drastic variation in electricity usage makes a representation using only three load

blocks a gross over-simplification. (initial brief at § VII.A.1; Ex. NYI-39; Ex. NYI-38 at 14:16-18)

70. MISO witness Chatterjee did not perform any study or analysis to support his speculation that performing a 8,760 hour analysis would not result in a significantly different result than the three load block analysis MISO used. (initial brief at § VII.A.1; Tr. 405:1-7)

71 Performing the DFAX analysis for every hour of the year would have a significant impact on the NYISO's participation because the MISO's analysis significantly over-counted and over-attributed megawatt-hours to the NYISO. (initial brief at § VII.A.1; Ex. NYI-38 at 14:20-15:23)

72. MISO's assumption that load remains steady at 85% of peak load for over nine months of the year is unrealistic and unnecessarily penalizes New York. The New York load duration curve clearly indicates that load in New York is lower than 60% of its peak load for eight months of the year and lower than 50% of its peak load for four months of the year. (initial brief at § VII.A.1; Ex. NYI-38 at 15:8-9, 15:11-13; Ex. NYI-42)

73. An 8,760-hour representation is used for MISO's forward-looking resource adequacy analysis incorporated in its MTEP planning process, for similar analyses in other regions of the eastern interconnection, and for production cost analysis for MISO's "top congested flowgate" study. (initial brief at § VII.A.1; Tr. 409:18-21; Tr. 410:7-10; Tr. 410:3-6)

74. MISO should have used each region's individual load duration curve to perform the DFAX analysis over all 8,760 hours of the year to calculate each region's individual participation over the MI/ON Interface. (initial brief at § VII.A.2; Ex. NYI-38, at 9:9-17; Ex. NYI-39; Ex. NYI-40; and Ex. NYI-41)

75. MISO's effort to shoe-horn the NYISO into an aggregate load duration curve developed using the combined MISO, PJM and NYISO load duration curves resulted in an inflated participation factor and resulting cost allocation to the NYISO, while reducing MISO's relative participation and cost allocation. (initial brief at § VII.A.2; Ex. NYI-38 at 9:25-13:2-6; Tr. 403-17-404:16)

76. MISO's unilateral decision to permit directional contributions to the flow participation over the four circuits that comprise the MI/ON Interface to offset each other is inappropriate and inconsistent with other decisions that MISO made with regard to netting of contributions in the DFAX study. (initial brief at § VII.A.3)

77. When power is permitted to flow freely over the four circuits of the MI/ON Interface the four circuits actually participate in the transfer of power from MISO generation to MISO load in addition to transferring Lake Erie loop flow. Unlike the NYISO, PJM and IESO power flows in the DFAX analysis, a significant quantity of MISO's power flows "loop" out of, then back into MISO across the four circuits that comprise the MI/ON Interface. The MISO DFAX analysis indicates that MISO power flows from Michigan to Ontario (positive distribution factors) on the L4D and L51D circuits, and flows back from Ontario

to Michigan (negative distribution factors) on the J5D and B3N circuits. (initial brief at § VII.A.3; Ex. NYI-38 at 6:14-21)

78. By summing the directional participation factors on all four of the circuits as MISO has done, and netting the flows with positive distribution factors against the flows with negative distribution factors, MISO's use of the MI/ON Interface and true contribution to flows on the B3N Circuit is understated. (initial brief at § VII.A.3; Ex. NYI-38 at 6:21-7:2; Tr. 419-420; Ex. NYI-74; Ex. MSO-1B; Tr. 419:24-420:3)

79. MISO, inappropriately, does not account for any economic impacts of generation dispatch in its hypothetical DFAX analysis. The DFAX study was performed by increasing the output of each generator within an RTO, pro rata, based on each generator's maximum MW output, to serve the load within that RTO. MISO's approach dispatches all generation within an RTO pro rata, based on each generator's maximum output, regardless of the actual costs to dispatch that generator. However, RTOs do not serve their load by uniformly ramping up all of the generation in their control area; they use security constrained economic dispatch software to achieve a least cost economic solution. (initial brief at § VII.A.4; Tr. 440:5-25; Tr. 440:5-8; Tr. 1077:4-6; Tr. 440:5-8)

80. It was not appropriate to base the DFAX analysis on the contribution to flows on all four of the circuits that comprise the MI/ON Interface. The B3N circuit, on which the Replacement PARs are installed, should have been the circuit used to determine the flow contribution of each ISO/RTO in the DFAX analysis. (initial brief at § VII.A.5; Ex. NYI-38 at 6:2-7:6)

81. Only considering flows over the B3N circuit avoids the issue of netting participation over the four circuits that is discussed in Section VII.A.3 of this initial brief because each ISO's or RTO's generation-to-load transfers only participate on the B3N circuit in one direction. (initial brief at § VII.A.5; Ex. NYI-38 at 6:2-9)

82. The magnitude of the DFAX flaws becomes more evident when multiple flaws are corrected simultaneously. (initial brief at § VII.A.6)

83. Other flaws in the DFAX analysis include ignoring the cumulative contribution of regions other than MISO, NYISO, PJM and IESO to unscheduled Lake Erie power flows. (initial brief at § VII.A.7; Ex. NYI-38 at 16-19; Ex. NYI-43)

84. Mr. Chatterjee developed, and MISO considered, many different DFAX scenarios. (initial brief at § VII.B; Tr. 349:5-350:5; Ex. PTO-12)

85. MISO and ITC abandoned the idea of charging transactions scheduled over the MI/ON Interface for a portion of the cost of the Replacement PARs after ITC realized that the largest portion of the cost would effectively be collected from ITC Transmission customers. (initial brief at § VII.B; Ex. NYT-22 at 2)

86. Scheduled transactions contribute to loop flow on the MI/ON Interface and entities scheduling imports and exports over the MI/ON Interface would benefit from avoiding curtailment of those transactions. (initial brief at § VII.B; Tr. 317:15-318:1)

87. The DFAX study does not account for Lake Erie loop flow that is caused by transactions. (initial brief at § VII.B; Ex. MSO Tab D at 4:22-5:2; Ex. MSO Tab E at 17:11-13; Tr. 514:3-5)

88. MISO's proposed Schedule 36 and Attachment SS contain no description of the service that the NYISO's customers will receive in return for their payments. (initial brief at § VIII; Tr. 126:24-127:4)

89. MISO's proposed Schedule 36 and Attachment SS do not specify a service obligation or standard that Joint Aplicants must meet in order to be paid, and no discounts have been provided during outage periods. (initial brief at § VIII; Ex. NYI-1 at 15:5-17; NYI-7; NYI-8; Ex. NYI-65 at 2; Ex. NYI-5, NYI-6, NYI-9)

90. The Joint Applicants' claim that the MI/ON PARs will "fully mitigate" Lake Erie loop flow in 74% of hours and reduce Lake Erie loop flow by 600 MW at all other times is vastly overstated. (initial brief at § IX.A; Ex. NYI-1)

91. Lake Erie loop flows were within the Control Band in 49.41% of hours for the year ending March 31, 2012; before MISO and IESO even began operating the MI/ON PARs to better conform actual power flows to scheduled power flows. (initial brief at § IX.A; Ex. NYI-1 at 12:16-13:3 (referring to data in Ex. NYI-4))

92. At times when MI/ON Interface power flows are within the Control Band and are expected to remain within the Control Band, the Operating Instruction does not require MISO and IESO to take additional PAR actions to further reduce Lake Erie loop flow. (initial brief at § IX.A; Ex. NYI-3 at 52 (§ 3.01) and 53 (§§ 3.4.1, 3.4.2))

93. MISO views "fully mitigate" as meaning "completely manage" Lake Erie loop flow to "near zero megawatts." (initial brief at § IX.A; Tr. 492:24-493:19)

94. Over the April 5, 2012 to July 18, 2012 period, actual power flows measured at the MI/ON Interface were within +/-10 MW of scheduled power flows (i.e., "fully mitigated") in only 3.3% of the 30,121 five minute intervals that MISO recorded. (initial brief at § IX.A; Ex. NYI-66)

95. MISO and and IESO are operating the MI/ON PARs to achieve the +/-200 MW Control Band; they are not operating the MI/ON PARs to "fully mitigate" Lake Erie loop flow. (initial brief at § IX.A; Ex. NYI-66)

96. If just one of the four circuits at the MI/ON Interface is not PAR controlled, the PARs on the three remaining circuits would have very limited ability to conform flow to schedule at the MI/ON Interface, and the local system would have to operate near applicable reliability limits in order to provide this limited degree of control. (initial brief at § IX.A; Ex. NYI-1 at 33:13-34:23; Ex. NYI-33; Ex. NYI-37; Ex. NYI-35)

97. There have been no studies performed that quantify the effectiveness of the MI/ON PARs for any sub-optimal condition. (initial brief at § IX.A; Ex. NYI-35)

98. When the Replacement PARs entered service and MISO and IESO began operating the MI/ON PARs to better conform actual power flows to scheduled power flows at the MI/ON Interface, MISO announced that it was not changing its method of calculating interface prices to reflect an expectation that the MI/ON PARs would better control Lake Erie loop flow because Hydro One's L4D PAR was out of service. This was an admission that MISO did not expect the MI/ON PARs to be able to effectively conform actual power flows to scheduled power flows at the MI/ON Interface without the L4D PAR in service. (initial brief at § IX.A; Ex. NYI-21; Ex. NYI-46 at 24-25)

99. The Joint Applicants' claim that the MI/ON PARs "are expected to fully mitigate Lake Erie loop flows approximately 74% of the time, and reduce them by approximately 600 MW the remainder of the time" assumes that all of the MI/ON PARs will be available 100% of the time. (initial brief at § IX.A; Ex. MSO-Tabe E at 19:5-17)

100. From April 5, 2012 to July 18, 2012 (the period for which NYISO submitted MI/ON PAR operating data in Exhibit NYI-66) at least one MI/ON PAR was out of service on 73 of the 104 days in the period. (initial brief at § IX.A; Ex. NYI-66)

101. Based on the NYISO's review of one months' operating data with the L4D PAR out of service, it appears that the performance of the [four] available MI/ON PARs has not improved upon the performance that the NYISO recorded for periods when the MI/ON PARs were not available. (initial brief at § IX.B; Ex. NYI-1 at 38:12-15)

102. On average, Lake Erie loop flow was 48 MW in a counter-clockwise direction over the April 5 to July 18, 2012 period. MISO estimates that if the MI/ON PARs had not been in operation, the average, net directional value of Lake Erie loop flow would have been 85 MW in a counter-clockwise direction. (initial brief at § IX.B; Ex. NYI-66 (data in Column Six, which is MISO's estimate of what Lake Erie loop flow would have been, but for the operation of the MI/ON PARs))

103. On average, MISO estimates the MI/ON PARs blocked 37 MW of counter-clockwise loop flow over the April 5 to July 18, 2012 period. (initial brief at § IX.B; Ex. NYI-66 (data in Column Six, which is MISO's estimate of what Lake Erie loop flow would have been, but for the operation of the MI/ON PARs))

104. Blocking counter-clockwise loop flow can be detrimental to the NYISO because counter-clockwise loop flow tends to relieve transmission congestion in New York. (initial brief §§ IX.B, V.C)

105. Of the 30,121 five minute intervals for which data was provided, the Column Four data indicated that loop flow was within the +/-200 MW Control Band in 16,696 intervals, or 55.4% of the total intervals. (initial brief at § IX.B; Ex. NYI-66 (data in Column 4, which is MISO's measurement of the loop flow that actually occurred in each interval in real-time))

106. For the seven month period commencing July 1, 2011 and ending January 31, 2012 MI/ON Interface flows were estimated to be within +/-200 MW of MI/ON Interface

schedules in 57.5% of hours. (initial brief at § IX.B; Exhibit NYI-1 at 37:19-21; Exhibit NYI-4)

107. In October of 2011, MI/ON Interface flow was within +/-200 MW of the MI/ON Interface schedule in 75.7% of hours. (initial brief at § IX.B; Exhibit NYI-1 at 38:1-2; Exhibit NYI-4)

108. The operation of the MI/ON PARs to better conform flow to schedule at the MI/ON Interface from April 5 to July 18, 2012 does not appear to have reduced Lake Erie loop flow. (initial brief at § IX.B)

109. From April 5 to July 18, 2012, the highest recorded interval of counter-clockwise loop flow was 1444 MW, which is more than double the MI/ON PARs claimed control capability of 600 MW. The highest recorded interval clockwise loop flow was 864 MW. (initial brief at § IX.B; Ex. NYI-66 (data in Column 4, which is MISO's measurement of the loop flow that actually occurred in each interval in real-time))

110. Using a +/-10 MW bandwidth as a proxy for loop flow being "completely managed," of the 30,121 five minute intervals considered, actual power flows were within +/-10 MW of scheduled power flows in only 1003 intervals, or 3.3% of all intervals, not even close to the "fully mitigated in 74% of all hours) claim of MISO witness Mallinger. (initial brief § IX.B; NYI-66 (Column 4 data))

111. The MI/ON PARs blocked 600 MW or more of Lake Erie loop flow in 0.4 percent of the 30,121 intervals included in Exhibit NYI-66. (initial brief § IX.B; NYI-66 (Column 5 data on "Total PAR Offset")

112. The operation of the MI/ON PARs made Lake Erie loop flow worse in 10,158 five minute intervals, or 33.7 percent of all intervals over the April 5 to July 18, 2012 period. The operation of the MI/ON PARs exacerbated Lake Erie loop flow in 5,613 intervals (18.6 percent of all intervals) during which the actual Lake Erie loop flow was outside the +/-200 MW Control Band. (initial brief § IX.B; NYI-66 (comparison of actual Lake Erie loop flow in Column Four to MISO's estimate of what Lake Erie loop flow would have been if there were no PARs at the MI/ON Interface in Column Six. When the loop flow in Column 4 of Exhibit NYI-66 is greater than the loop flow in Column 6 of Exhibit NYI-66 (without regard to the direction of the loop flow in either column), it indicates that the operation of the MI/ON PARs exacerbated Lake Erie loop flow)

113. In 1337 intervals (4.4 percent of all intervals) the operation of the MI/ON PARs caused loop flow that was expected to be inside the +/-200 MW Control Band to instead fall outside the Control Band. (initial brief § IX.B; NYI-66 (comparison of Column Four and Column Six data))

114. Transmission Loading Relief ("TLR") is a procedure that Reliability Coordinators like the NYISO, MISO, IESO and PJM use to address power flows that are causing reliability impacts on their transmission systems. It permits Reliability Coordinators to request the curtailment or removal of inter-Control Area transactions that have a substantial impact

on a particular transmission constraint that presents a reliability risk. (initial brief at § IX.C; Ex. NYI-1 at 5:16-23; Ex. NYI-1 at 6:3-17; Tr. 835:21-25)

115. TLR is implemented via the North American Electric Reliability Corporation's ("NERC's") Interchange Distribution Calculator ("IDC"). The IDC is a database that identifies inter-Control Area transactions that have a 5% or greater impact on the transmission constraint that TLR is being requested to address. The IDC identifies proposed pro rata reductions to all of the transactions that have a 5% or greater impact on the transmission constraint to achieve the requested level of relief. (initial brief at § IX.C; Ex. NYI-1 at 5:16-23; Ex. NYI-1 at 6:3-17; Tr. 835:21-25)

116. The IDC transmits the pro rata transaction reductions to each of the Balancing Authorities that are participants in the transactions that need to be curtailed or removed to provide the requested relief. (initial brief at § IX.C; Ex. NYI-1 at 5:16-23; Ex. NYI-1 at 6:3-17; Tr. 835:21-25)

117. The MI/ON PARs are subject to a modeling treatment in the NERC IDC that is different from all of the other PARs that surround Lake Erie. At times when MISO and IESO set the MI/ON PARs to be "regulated" in the NERC IDC model, that model assumes that there is no Lake Erie loop flow, whatsoever, crossing the MI/ON PARs, so no power flows will be seen as crossing the MISO/IESO border and potentially causing a 5% or greater impact. In other words, the IDC model will represent power flows as conforming to schedules, without regard to what is actually happening in the real world. (initial brief at § IX.C; Ex. NYI-1 at 6:3-17; Tr. 835:21-25; Ex. NYI-1 at 8:14-20)

118. At times when the MI/ON PARs are set to "non-regulated," Lake Erie loop flow is permitted to flow across the MI/ON interface in the NERC IDC model, and transactions at that interface are available to be removed via TLR in order to address reliability concerns that Lake Erie loop flow is causing or aggravating in New York, PJM, MISO or IESO. (initial brief at § IX.C; Tr. 835:9-836:5)

119. MISO and IESO are responsible for determining if Lake Erie loop flows are within the +/-200 MW "control band," and are expected to remain within the +/-200 MW control band, and for accurately setting the IDC mode to "regulated" or "non-regulated" on that basis. (initial brief at § IX.C; Ex. NYI-10 at 7; Ex. NYI-64 at 2; Ex. NYI-72 at 2)

120. It is very important for MISO and IESO to timely and accurately reflect the correct scheduling mode for the MI/ON PARs in the NERC IDC. When the IDC flag is set to "regulated," this blocks the ability of NYISO and PJM (and other control areas) to use TLRs to remove transactions that are adversely impacting reliability. (initial brief at § IX.C; Ex. NYI-1 at 8:22-9:2)

121. Considering only the days on which there was at least one change made to the IDC Status in Ex. NYI-66 (in order to address certain infirmities in the data that the MISO provided), in 28.6 percent of the time that MISO and IESO set the flag to "Regulated," it is set incorrectly. (initial brief at § IX.C; Ex. NYI-66 (Column 4indicating that Lake Erie loop

flow is in excess of 200 MW, yet in Column 8 MISO and IESO have set the IDC Status to "Regulated"))

122. MISO's and IESO's lack of diligence in setting the IDC Status of the MI/ON PARs could have significant adverse reliability consequences for the NYISO, and for other potentially impacted Control Areas. (initial brief at § IX.C)

123. On June 16, 2012 the L4D PAR was out-of-service. The MI/ON PARs showed little ability to control of loop flow with only three of the four interface circuits PAR controlled. (initial brief at § IX.B; Ex. NYI-73 at 3 and 6 (the PS4 Hydro One PAR on the L4D line was bypassed on June 10, 2012 and returned to service on June 17, 2012); Ex. NYI-66 at 551-559)

124. On June 16, 2012, counterclockwise loop flow exceeded the +/- 200 MW Control Band, and remained outside the Control Band for the rest of the day. MISO and IESO made little effort to move the MI/ON PARs to better conform actual power flows to scheduled power flows at the MI/ON Interface. The MI/ON PARs were only moved in fifteen 5-minute intervals out of 191 5-minute intervals between 8:05 a.m. and 11:55 p.m. None of the PAR moves that MISO and IESO took brought actual power flow significantly closer to scheduled power flow. (initial brief at § IX.B; Ex. NYI-66 at 551-559)

125. In the morning of June 16, 2012, MISO and IESO placed the MI/ON PARs in "Regulated" mode at a time when loop flow was hundreds of MWs away from achieving the +/-200 MW Control Band. MISO and IESO then left the PARs in "Regulated" mode while the loop flow was well outside the +/-200 MW control band for more than an hour. (initial brief at § IX.B; Ex. NYI-66 at 554 (compare the "IDC Status" column to the "5 Minute Avg Adj Loop Flow" column to identify time intervals when the MI/ON PARs are set to Regulated but loop flow exceeds the +/-200 MW control band))

126. On July 18, 2012, Lake Erie loop flow changed dramatically between 10:00 and 10:15 a.m., and by 10:10 the MI/ON PARs were making loop flow worse, not better. At 10:15 a.m., actual loop flow (Column 4) was 337 MW clockwise; Total PAR Offset (Column 5) indicates MI/ON PARs were being operated to cause 403 MW of clockwise flow. If the MI/ON PARs had not been in service at all, loop flow would have been 65 MW in a counter-clockwise direction. It appears that loop flow would have remained within the +/-200MW bandwidth from 10:10 a.m. until around 11:50 a.m. if the MI/ON PARs had not been in service. The MI/ON PARs were causing approximately 400 MW of additional clockwise flow. According to the data MISO provided, the operation of the MI/ON PARs was pushing loop flows that would have been within the +/-200 MW control band substantially outside the control band in the clockwise direction. (initial brief at § IX.B; Ex. NYI-66 at at794-801 ("Actual Loop Flow" estimate in Column 6))

127. Starting at approximately 11:40 a.m. on July 18, 2012, MISO and IESO began taking actions to bring loop flow back within the Control Band. it took MISO and IESO an hour (until 12:40) to get the MI/ON PARs turned around so that the PARs were actually reducing clockwise flow, rather than exacerbating it. Other periods of high clockwise loop flow occurred over the course of the day. From 14:00 (2:00 p.m.) until 15:15 (3:15

p.m.) loop flow averaged more than 400 MW in the clockwise direction. (initial brief at § IX.B; Ex. NYI-66 at at794-801 (Column 5 ("Total PAR Offset"), the calculated contribution to loop flow from the MI/ON PARs); Tr. 882:22-24)

128. Beginning around 17:00 (5:00 p.m.) on July 18, 2012, loop flow became significantly counterclockwise, and it took MISO and IESO approximately 45 minutes to get the MI/ON PARs turned back around so that they were not further exacerbating the counterclockwise loop flow that was occurring. Loop flow remains significantly counterclockwise, and outside the +/-200 MW Control Band, from just before 17:00 (5:00 p.m.) until around 21:00 (9:00 p.m.). (initial brief at § IX.B; Ex. NYI-66 at794-801 (MISO calculated Total PAR Offset term in Column 5))

129. On July 18, 2012, MISO and IESO placed the MI/ON PARs in "Regulated" mode at a time when loop flow was not even close to achieving the +/-200 MW control band. MISO and IESO then left the PARs in "Regulated" mode while the loop flow was well outside the +/-200 MW control band for more than two consecutive hours. (initial brief at § IX.B; Ex. NYI-66 at 794 (comparing the "IDC Status" column (Column 8) to the actual loop flow data reported in Column 4)

130. During 846 hours between April 5, 2012 and July 18, 2012 MISO and IESO operated the PARs in a manner that makes loop flow worse, not better. (initial brief at § IX.B; Exh. NYI-66 (comparing the "5 Minute Avg Adj Loop Flow" column to the "Actual Loop Flow" column to identify time intervals when the "5 Minute Avg Adj Loop Flow" value is greater than the "Actual Loop Flow" value))

131. Much of the time, the MI/ON PARs are not being operated in the manner that would be necessary to better conform actual power flows to scheduled power flows at the MI/ON Interface. PAR tap moves only occurred in 1,458 five minute intervals, or 4.8% of the total intervals from April 5, 2012 through July 18, 2012. (initial brief, § IX.B; Ex. NYI-66 (data in Column 7 "Tap Move Performed"))

132. ITC has indicated that if operating to achieve the Control Band proves too onerous, MISO, ITC and IESO need to have a way to escape the obligation that they assumed. (initial brief, §§ IX.B, IX.E; Ex. NYT-35)

133. On June 19, 2012 there was predictable counter-clockwise Lake Erie loop flow that significantly exceeded the +/-200 MW Control Band for most of the day. The MI/ON PARs were operated to counteract approximately 400 MW of loop flow, but no attempt was made to operate the PARs to achieve the claimed limits of their control capability, or to further reduce Lake Erie loop flow. Only one MI/ON PAR was moved in one five minute interval over the entire day. (initial brief, § IX.B; Ex. NYI-66 at 574-581)

134. On July 17, 2012 the L4D PAR was out of service. Counter-clockwise loop flow was extremely high that day. Over the course of the day, there were only two PAR tap moves taken, despite the loop flow being outside the +/-200 MW control band for the entire day. For much of the day, the MI/ON PARs were slightly exacerbating (by up to 24 MW) the high Lake Erie loop flow that was occurring. Although MISO claims that 300-350 MW

of loop flow can be mitigated with three of the four MI/ON circuits controlled, Column Five of Exhibit NYI-66 "Total PAR Offset" indicates that on July 17 the PARs were never operated to reduce Lake Erie loop flow. On July 17, MISO and IESO either could not, or would not, take additional taps on the MI/ON PARs to better conform actual power flows to scheduled power flows at the MI/ON Interface. (initial brief § IX.B; Ex. NYI-35 at 2; Ex. NYI-66 at 786-794 (column 5))

135. The MI/ON PARs should have been able to provide additional loop flow control on June 19 and July 17, 2012, based on MISO's claims that the MI/ON PARs will provide 600 MW offset of potential loop flows almost all of the time, and can provide 300-350 MW of control when one of the four circuits on the MI/ON Interface is not PAR controlled. (initial brief § IX.B; Ex. NYI-66 at 574-581, 786-794; Ex. MSO-Tab E at 19:5-17; Ex. NYI-35 at 2)

136. The history of the MI/ON PARs indicates that they are prone to failure. (initial brief at § IX.D; Ex. NYI-1 at 23-27; Ex. NYI-11; third-party reports in Ex. NYI-12, -13, -14, -15 (at p. 40), -16 (at pp. 34-35), -17 (at p. 21), -18 (at p. 24), -19 (at p. 25), -20 through -23, and -24 (at p. 22))

137. The Chief Executive Officer of ITC reacted in an April 10, 2003 e-mail to the then-recent failure of the Original PAR with the statement "it appears that these devices are nothing but junk." (initial brief at § IX.D; Ex. NYI-29)

138. When the Replacement PARs were placed into service on April 5, 2012, Hydro One's L4D PAR was not in service. (initial brief at § IX.D; Ex. NYI-1 at 27-29)

139. ITC chose a different manufacturer for the Replacement PARs than the manufacturer of the Original PAR. (initial brief at § IX.D; Ex. NYI-1 at 30-31; Ex. NYI-27 through NYI-29)

140. On December 17, 2011, the L4D PAR went out of service and did not return to service until June 1, 2012, due to a "gas accumulation alarm." The reason for the outage was also described by IESO as a "bad oil sample." (initial brief at § IX.D; Ex. NYI-73 at 1; Tr. 871:7-9; Ex. NYI-20)

141. The L4D PAR was bypassed on June 10, 2012 due to another "gas accumulation alarm," and returned to service on June 17 at 13:16. The reason for the outage was also described by IESO as a "bad oil sample." (initial brief at § IX.D; Ex. NYI-73)

142. The L4D PAR was bypassed on July 12, 2012 at 21:28 p.m. due to a "gas accumulation alarm," and returned to service on July 18 at 00:54 a.m. (initial brief at § IX.D; Ex. NYI-73)

143. The "gas accumulation alarm" incidents on the L4D PAR indicates a dangerous situation and the possibility of an explosion. (initial brief at § IX.D; Tr. 871:12-872:10)

PROPOSED CONCLUSIONS OF LAW

1. The Joint Application violates the Federal Power Act. (initial brief at § I.A)

2. The Joint Application does not meet the requirements of the Commission's regulations. (initial brief at § I.D)

3. The Joint Application contravenes Commission precedent. (initial brief, at § IV.A)

4. The Joint Application's proposed cost allocation also contravenes the policies reflected in Order No. 1000. (initial brief, at § IV.C.)

5. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because the Joint Application provides no studies or other quantification of "benefits" they assert NYISO and PJM will receive from the Replacement PARs. (initial brief at § V.B)

6. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because the Replacement PARs (and the Original PAR) were built pursuant to preexisting contract obligations, and were built for the benefit of Detroit Edison and ITC customers. (initial brief at § III.B)

7. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because the provisions under which MISO and the Independent Electricity System Operator of Ontario ("IESO") will operate the Ontario and Michigan PARs, including the Replacement PARs (collectively, the "MI/ON PARs"), as well as the proposed MISO tariff provisions, permit MISO and IESO to favor their own customers and interests over NYISO's and PJM's customers and interests. (initial brief at §§ III.C, IV.E)

8. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because the Joint Application discriminates against NYISO and PJM customers by failing to propose allocation of charges to IESO customers, and by charging NYISO and PJM while MISO customers located outside the ITC transmission zone are not being charged. (initial brief at §§ IV.C, IV.D)

9. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because control by the MI/ON PARs of counterclockwise Lake Erie loop flow does not benefit, and may harm, NYISO and its customers. Lake Erie loop flow has been counterclockwise on average for 2012 so far, and MISO's DFAX cost allocation analysis suggests that Lake Erie loop flow will continue to occur in a counterclockwise direction into the mid-term future. (initial brief at § V.C)

10. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because the Joint Applicants no studies or analyses to support their repeated claim that the MI/ON PARs will control 600 MW of Lake Erie loop flow, and actual MI/ON PAR performance data for the period since the Replacement PARs were placed in service reveal that the claim is vastly overstated. (initial brief at § IX.A)

11. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because the outage history of the MI/ON PARs indicates a significant risk that the control of Lake Erie loop flow will be provided only intermittently. (initial brief at § IX.B)

12. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because, unlike the rest of the MISO tariff that charges rates for defined services, the tariff provisions filed with the Joint Application propose charges to NYISO and PJM for unspecified services (essentially, for "nothing") and the collection of a rate for nothing is unduly discriminatory to those entities and their customers. (initial brief at § VIII)

13. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because, besides seeking to charge NYISO and PJM for an undefined service, the MISO tariff provisions fail to establish any sort of performance standard or any service obligation of MISO or ITC to the customers that will receive the non-service. (initial brief at § VIII)

14. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because data supplied by MISO indicates that MISO and IESO are failing to set the MI/ON PARs-related "flag" in the Interchange Distribution Calculator properly, precluding NYISO and PJM and other regions from using transmission loading relief ("TLR") to call for curtailment of transactions to protect reliability at times when the MI/ON PARs are not successfully mitigating Lake Erie loop flow. (initial brief at § IX.C)

15. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because the Joint Applicants submitted no evidence of any actual contribution of NYISO to Lake Erie loop flow, and instead submitted a fundamentally flawed DFAX analysis that uses hypothetical data to estimate NYISO's expected future contribution to Lake Erie loop flow. (initial brief at §§ VI.A, VII.A, VII.B)

16. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because, while the rebuttal testimony of the Joint Applicants argues that the cost of the Replacement PARs should be allocated based solely on "cost causation," the Joint Applicants have not submitted studies showing that Lake Erie loop flow causes reliability issues, and that those reliability issues required ITC to construct the Replacement PARs. The only specific reliability issues identified in the record as a reason for construction of the replacement PARs are those reliability concerns identified in MTEP06. (initial brief at §§ IV.A, IV.F and IV.D.2)

17. The charges in the Joint Application are unjust, unreasonable and unduly discriminatory because MISO and ITC (and potentially IESO) have indicated a potential lack of commitment to operate the MI/ON PARs in the manner called for in the Operating Instruction and in representations to the DOE (initial brief at § IX.F).