

New York Independent System Operator, Inc.) **Docket No. ER17-____-000**

Pursuant to Rule 207(a)(5) of the Federal Energy Regulatory Commission (“Commission” or “FERC”) Rules of Practice and Procedure, 18 C.F.R. § 385.207(a)(5), the New York Independent System Operator, Inc. (“NYISO”) hereby respectfully requests waivers of Sections 17.1.1 and 17.1.4 of its Market Administration and Control Area Services Tariff (“Services Tariff”) as they relate to the NYISO’s transmission constraint pricing and the definition of “Transmission Shortage Cost” in Section 2.20 of the Services Tariff.¹ The requested waivers would address an inconsistency between the NYISO’s current tariff provisions governing transmission constraint pricing, which were implemented in February 2016, and the application of those rules in the NYISO’s software.

The current tariff provisions establish a graduated price value, or Transmission Shortage Cost, to be applied in certain instances of transmission constraints.² As explained more fully below, the transmission constraint pricing rules establish limits on the Shadow Prices that the NYISO's dispatch and pricing algorithms use to resolve transmission constraints.

The NYISO's software does not apply the graduated Transmission Shortage Cost in certain circumstances that are not specifically described in the Services Tariff. As a result, there

¹ The same definition of Transmission Shortage Cost is also set forth in Section 1.20 of the NYISO Open Access Transmission Tariff (“OATT”). Accordingly, all descriptions of, and references to, Section 2.20 of the Services Tariff herein apply equally to Section 1.20 of the OATT.

² Capitalized terms not otherwise defined herein shall have the meaning specified in the Services Tariff.

are instances where the NYISO calculates market clearing prices that are different than what would have been calculated if the graduated Transmission Shortage Cost was applied in all cases. In addition, the Services Tariff does not fully describe the manner in which the NYISO's software resolves infeasible transmission constraints – in cases of a transmission constraint for which the available dispatch capability is insufficient to fully resolve the constraint at the existing limit.³

The NYISO believes that the most appropriate course of action is to continue applying the transmission constraint pricing methodology that is currently coded in its software until a review of potential modifications to the tariff and software can be completed with its stakeholders. The NYISO has evaluated potential interim measures, including software modifications, and concluded that they are likely to introduce inappropriate pricing outcomes and unnecessary consumer cost impacts as compared to the current software rules.

The NYISO is examining, with stakeholders and its Market Monitoring Unit (“MMU”), potential revisions to both the current tariff provisions and software coding pertaining to transmission constraint pricing that would resolve the current inconsistencies in the most effective and appropriate manner. The NYISO is undertaking an expedited stakeholder process and intends to submit proposed tariff revisions to the Commission and make software changes in the near future. The NYISO requests that the waivers sought with this filing remain in effect until these tariff revisions and software modifications are in place.

³ This logic for resolving infeasible transmission constraints has been in place since the NYISO's inception. Therefore, it has been utilized in SCUC since 1999 and in the real-time scheduling system (*i.e.*, RTC and RTD) since it was implemented in 2005. Additional details regarding this logic and the current software implementing the graduated Transmission Shortage Cost are provided in a presentation by the NYISO at the October 19, 2016 Market Issues Working Group meeting, available at: http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2016-10-19/Transmission%20Constraint%20Pricing%2010192016%20MIWG%20FINAL%20vUpdate.pdf.

As discussed below, granting this waiver request would be consistent with Commission precedent, including relevant NYISO precedent. The NYISO has discussed this request with its stakeholders and its MMU. The MMU has indicated support for the NYISO's waiver request, and stakeholders have not indicated opposition.⁴

I. Communications

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II. Background

A. Development of the NYISO's Transmission Shortage Cost Rules

Transmission Shortage Cost values are used in the NYISO's Security Constrained Unit Commitment ("SCUC") and Real Time Scheduling ("RTS") dispatch and pricing algorithms to establish an upper bound on the Shadow Price used to calculate Locational Based Marginal Prices ("LBMPs"). The Services Tariff defines a Shadow Price as the "marginal value of relieving a particular Constraint which is determined by the reduction in system cost that results

⁴ The NYISO also plans to implement improvements to its internal processes to help avoid future issues of this nature.

⁵ The NYISO respectfully requests waiver of 18 C.F.R. § 385.203(b)(3) to permit service on counsel for the NYISO in both Washington, D.C. and Richmond, VA.

from an incremental relaxation of that Constraint.”⁶ Having an upper bound allows the software to produce efficient and timely dispatch results by concluding its search for a solution and establishing a price in the face of a transmission constraint that cannot be solved or can be solved only at a Shadow Price that is higher than the upper bound.⁷

Beginning in June 2007, the NYISO implemented a Transmission Shortage Cost with a single upper bound of \$4,000/MWh. With additional experience and analysis, the NYISO determined that using three graduated price values would substantially improve market efficiency during certain transmission shortages. A graduated pricing mechanism establishes a series of upper bounds for a Shadow Price based on the severity of the transmission constraint shortage as measured in MW.

In the context of a transmission constraint, the “shortage” is the absence of dispatchable resources available to relieve a transmission constraint for less than the prescribed shortage cost value. The Services Tariff definition of “Transmission Shortage Cost” establishes graduated price values:

A series of quantity/price points that defines the maximum Shadow Price of a particular Constraint that will be used in calculating LBMP. The Transmission Shortage Costs are set at \$350/MWh for shortages above zero and less than or equal to 5MW, \$2350/MWh for shortages above 5MW and less than or equal to 20MW, and \$4000/MWh for shortages above 20MW.⁸

B. Inconsistency Between the Transmission Shortage Cost Tariff Language and the NYISO Software

The NYISO’s software does not apply the graduated Transmission Shortage Cost in all

⁶ Services Tariff at § 2.19

⁷ See *New York Independent System Operator, Inc.*, Docket No. ER15-485-000; *Proposed Tariff Amendments to Revise Transmission Shortage Costs* at 2 (November 25, 2014) (the “November 2014 Tariff Filing”).

⁸ See Docket No. ER15-1061, *New York Independent System Operator, Inc.*, Proposed Tariff Revisions to Ancillary Service Demand Curves and the Transmission Shortage Cost (February 18, 2015); and *New York Independent System Operator, Inc.*, 151 FERC ¶ 61,057 (2015).

circumstances. The graduated Transmission Shortage Cost is applied to all transmission constraints on facilities that have constraint reliability margin (“CRM”)⁹ and where sufficient dispatchable resources exist to fully resolve the constraint prior to the execution of the economic dispatch processes that determine prices and schedules. But for transmission facilities that have no CRM, including all external transmission interfaces, as well as certain transmission constraints without sufficient dispatchable resources, the software applies only the single \$4,000/MWh Transmission Shortage Cost value.

Prior to executing the economic dispatch, the software conducts a preliminary screen to determine whether sufficient dispatchable resource capacity is available to resolve each transmission constraint. This screen is conducted without regard to the value of bids submitted by resources and without consideration of other constraints that must be simultaneously resolved (e.g., other transmission constraints, Operating Reserve and Regulation Service requirements). If this preliminary screen indicates that there is insufficient dispatchable capacity to resolve a particular transmission constraint, the constraint is guaranteed to be infeasible in the economic dispatch and the graduated Transmission Shortage Cost is not applied. Instead, the software applies a single \$4,000/MWh Shadow Price cap. As a result, the software sets the relevant Shadow Price for these infeasible transmission constraints consistent with the bids of

⁹ The CRM defines a value below the maximum physical limit on the facility that is used as the facility’s effective limit when making economic commitment and dispatch determinations. CRM values are normally at least 20 MW but are zero MW for a limited number of internal facilities and functionally zero on all external interfaces. The NYISO has made publically available a list of internal facilities that have a zero CRM value in order to provide greater transparency. See NYISO, *Constraint Reliability Margin (CRM) Posting*, available at: http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2016-12-21/Constraint%20Reliability%20Margin%20CRM.pdf.

dispatchable resources that can provide relief toward resolving the constraint, subject to a maximum allowable Shadow Price of \$4,000/MWh.¹⁰

The Services Tariff does not describe instances in which a value other than what is indicated by the graduated Transmission Shortage Cost should be applied. Therefore, the software's application of a single \$4,000/MWh Shadow Price cap to certain transmission constraints is inconsistent with the transmission shortage pricing rules as they are set forth in the Services Tariff. Moreover, the Services Tariff does not describe the logic used by the NYISO's software to resolve infeasible transmission constraints in the economic dispatch by adjusting the otherwise applicable limit commensurate with the amount of relief that is available.¹¹ This logic is applied to all infeasible transmission constraints regardless of whether they are subject to the graduated Transmission Shortage Cost rules or the single \$4,000/MWh Shadow Price cap.¹²

The filing letter to implement the graduated Transmission Shortage Cost did not address these details, and it has become clear that NYISO Market Participants were not aware of them. Furthermore, the MMU has expressed concerns regarding certain details of the NYISO's transmission constraint pricing rules as they have been implemented.

While the circumstances where the graduated Transmission Shortage Cost is not applied are not articulated in the tariff, there are valid reasons for this treatment. Furthermore, the filing

¹⁰ There are circumstances in which there is no physical dispatch capability available to resolve a particular transmission constraint in the dispatch interval being examined by the software. In these instances, the logic essentially results in eliminating such a constraint from evaluation by the software. This effectively results in assigning a \$0/MWh Shadow Price value to the transmission constraint.

¹¹ Although not described in the Services Tariff, this logic is briefly described in Section 4.3.2 of the NYISO Day-Ahead Scheduling Manual.

¹² For transmission constraints subject to the graduated Transmission Shortage Cost pricing logic, when determining the applicable level of relaxation necessary to make the constraint feasible (*i.e.*, capable of being resolved based on the quantity of dispatchable resources available), the software expressly accounts for the 20 MW of relief that is provided by the first two-steps of the graduated Transmission Shortage Cost.

letter reasonably implied that the first two steps of the graduated Transmission Shortage Cost were designed to price CRM and thus would not logically apply to zero CRM facilities.¹³ For transmission facilities without a CRM, any shortage would go beyond the applicable physical limit of the facility. Therefore, applying a \$4,000/MWh maximum allowable Shadow Price value is reasonable. That treatment is consistent with the last price value of the graduated Transmission Shortage Cost for facilities that have a CRM, under which Shadow Prices for shortages beyond the physical limit of a facility remained capped at \$4,000/MWh.¹⁴

C. Stakeholder Discussions, Market Impacts, and Next Steps

On August 29, 2016, Potomac Economics, the NYISO's MMU, presented a market report for the second quarter of 2016 at the Market Issues Working Group ("MIWG") meeting. The presentation raised several questions concerning transmission constraint Shadow Price levels following the implementation of the graduated Transmission Shortage Cost.¹⁵ The MMU expressed concern that the graduated Transmission Shortage Cost may have been implemented in a manner inconsistent with the Services Tariff. This led stakeholders to request additional information and prompted the NYISO to commence an internal analysis of its transmission constraint pricing software.

¹³ See November 2014 Tariff Filing at 4.

¹⁴ Internal transmissions facilities with a zero CRM value consist primarily of export-constrained generation pockets where the transmission system was designed to provide only the capability necessary to accommodate delivering the generation output within such areas to the system. Applying the graduated Transmission Shortage Cost to all such facilities could result in anomalous and undesirable negative prices in certain instances without providing the impacted generation facilities an ability to bid in a manner that minimizes their curtailment risk in the event that such facilities are constrained.

¹⁵ Potomac Economics, *Highlights from the Quarterly Report on the New York ISO Electricity Markets: Second Quarter of 2016* at 65-69 (presented at the August 29, 2016 MIWG meeting), available at: http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2016-08-29/NYISO%20Quarterly%20Report_2016-Q2_MIWG%208-24-2016.pdf.

On October 6, 2016, the NYISO issued a “Notice of Potential Market Problem” (“Notice”).¹⁶ The Notice indicated, based on the NYISO’s preliminary analysis and consultation with the MMU, that “the software deployed to implement the GTDC does not apply the GTDC under certain circumstances which are not specifically described in [Services Tariff §§ 2.20, 17.1.1, and 17.1.4].”¹⁷ It further stated that:

The NYISO is continuing to explore this matter with the MMU, and will discuss with stakeholders, the current implementation of the GTDC and potential software and tariff modifications to, on a going forward basis, increase the transparency and efficiency of the GTDC. The NYISO is also working with the MMU to quantify whether any inconsistencies between the MST and the GTDC software may have had material market impacts since its implementation in February 2016. The NYISO will commence its stakeholder discussions concerning these issues at the October 19, 2016 Market Issues Working Group meeting to provide clarity on the current software functionality and discuss whether future changes are needed.

At the October 19, 2016 MIWG meeting, NYISO staff presented a detailed description of how and when the graduated Transmission Shortage Cost is applied by the market software.¹⁸ NYISO staff also provided an overview of the software logic for resolving infeasible transmission constraints and the interaction of this logic with the transmission constraint pricing methodology that was implemented.

At the November 3, 2016 MIWG meeting, the MMU presented its assessment of the NYISO’s current transmission constraint pricing software.¹⁹ The MMU noted that Shadow

¹⁶ Section 3.5.1 of the Services Tariff establishes various notification and procedures applicable to potential Market Problems. The Notice complied with these requirements.

¹⁷ The graduated Transmission Shortage Cost is sometimes referred to as a “graduated transmission demand curve” or “GTDC.”

¹⁸ NYISO, *Transmission Constraint Pricing* (presented at the October 19, 2016 MIWG meeting), available at: http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2016-10-19/Transmission%20Constraint%20Pricing%2010192016%20MIWG%20FINAL%20vUpdate.pdf.

¹⁹ Potomac Economics, *MMU Assessment of the Graduated Transmission Demand Curve Implementation* (presented at the November 3, 2016 MIWG meeting), available at:

Prices from transmission constraints have been both greater than and less than the Shadow Price values that would result from applying the graduated Transmission Shortage Cost to all transmission constraints.²⁰ The MMU found that Shadow Prices using the current software were higher on average than the levels that would apply under the graduated Transmission Shortage Cost for many transmission shortages smaller than 5 MW.

http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2016-11-03/Evaluation%20of%20Potential%20Market%20Problem%20by%20MMU_11-02-2016_final.pdf.

²⁰ For example, consider a circumstance where, under the current implementation, the single \$4,000/MWh cap is applied to a transmission constraint related to facility with a non-zero CRM value:

- If 4 MW of relief were needed to resolve this transmission constraint and only one resource is available that can provide 3 MW of relief at a cost of \$500/MWh, under the current implementation, the limit on the transmission constraint would be relaxed (*i.e.*, increased to a level above the otherwise applicable limit, but still within the CRM and below the physical limit of the facility) to account for the 3 MW of relief that is available from the resource and a Shadow Price of \$500/MWh would be established for the transmission constraint.
 - If, however, the graduated Transmission Shortage Cost were applied to this facility, the 4 MW of relief available pursuant to the first step of the graduated Transmission Shortage Cost would be used to resolve the transmission constraint because this step is less expensive than the relief available from the hypothetical resource and the Shadow Price for the transmission constraint would be set at \$350/MWh (*i.e.*, the value of the first step of the graduated Transmission Shortage Cost which is set at \$350/MWh and is less than the hypothetical resource cost of \$500/MWh).
- Alternatively, if the 3 MW of relief available from the hypothetical resource cost \$200/MWh, under the current implementation, the Shadow Price for the transmission constraint would be set at this value (*i.e.*, \$200/MWh) after constraint relaxation is applied.
 - If, however, the graduated Transmission Shortage Cost were applied, the Shadow Price would again end up being set at \$350/MWh for the transmission constraint based on the value of the first step of the graduated Transmission Shortage Cost (*i.e.*, in this case, the 3 MW of relief available from the hypothetical resource at \$200/MWh would be used, while the remaining 1 MW of relief necessary to resolve the constraint absent any relaxation would be supplied by the first step of the graduated Transmission Shortage Cost at \$350/MWh).

The NYISO's presentation at the October 19, 2016 MIWG meeting provides further examples to demonstrate the operation of the current transmission constraint pricing software. This presentation is available at:

http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2016-10-19/Transmission%20Constraint%20Pricing%2010192016%20MIWG%20FINAL%20vUpdate.pdf.

Overall, the MMU concluded that production cost impacts, which are the NYISO's usual metric for determining the significance of market issues, were small. However, the MMU also estimated that balancing congestion shortfalls were approximately \$3.5 million higher for the period from February 12, 2016 through September 30, 2016 in circumstances where the Shadow Prices exceeded the levels that otherwise would have resulted from applying the graduated Transmission Shortage Cost to all transmission constraints. The MMU has recommended that the NYISO eliminate the inconsistency between the tariff and software by modifying the software to use the graduated Transmission Shortage Cost to price transmission constraints on all facilities that include a non-zero CRM value, while continuing to apply a single \$4,000/MWh cap for transmission facilities with a CRM of zero. The MMU has also supported reassessing the current value of \$2,350/MWh assigned to the second step of the graduated Transmission Shortage Cost to ensure that it produces reasonable pricing outcomes when applied more broadly.

NYISO staff also addressed Market Participants at the November 3, 2016 MIWG meeting.²¹ NYISO staff indicated its conclusion that the inconsistency between the Services Tariff and the current software constituted a "Market Problem" because it has had a material impact on the NYISO-administered markets. Specifically, prices appear to be materially different than they would have been if the graduated Transmission Shortage Cost had been applied to all transmission constraints. NYISO staff also advised stakeholders that it would submit this waiver request and assess whether to make software changes to conform to the

²¹ NYISO, *Transmission Constraint Pricing* (presented at the November 3, 2016 MIWG meeting), available at: http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2016-11-03/Transmission%20Constraint%20Pricing%20Update%2011032016%20MIWG%20FINAL%20v2.pdf.

current tariff provisions, potentially including adjustments to apply the graduated Transmission Shortage Cost to certain transmission constraints that are currently subject to the \$4,000/MWh cap.²²

After further evaluation, the NYISO determined that, rather than make conforming software changes now, it will instead work through its normal shared governance process to develop a Section 205 filing to propose revisions to its Services Tariff that will provide a more complete and accurate description of its transmission constraint pricing methodology. The NYISO will also work to develop appropriate software revisions to broaden the application of the graduated Transmission Shortage Cost to transmission constraints on all facilities with a non-zero CRM value.

Simply modifying the software to apply the graduated Transmission Shortage Cost to all transmission facilities with non-zero CRM values would not fully resolve the inconsistency between the tariff and software because the current tariff language does not include all aspects of the transmission constraint pricing rules. Specifically, it does not expressly describe the transmission constraint pricing rules for transmission facilities with a zero CRM value. In addition, it does not explain the interaction of the preexisting logic for resolving transmission constraint infeasibilities with the graduated Transmission Shortage Cost.

Before broadening the application of the graduated Transmission Shortage Cost, the NYISO will need to reassess the current \$2,350/MWh value assigned to the second step. The NYISO now believes this price may be excessive in certain instances and could result in significant, adverse consumer impacts.

²² In addition, NYISO staff explained that it had conducted a thorough review of its project implementation controls to identify potential improvements. NYISO staff indicated that it would implement new project management procedures to promote greater transparency and clarity regarding the implementation of new and revised market rules in 2017.

Stakeholders have expressed concerns regarding the process through which the NYISO developed and implemented the graduated Transmission Shortage Cost rules. Recent discussions have made clear that certain details of the NYISO's transmission constraint pricing rules were not adequately presented to stakeholders.

In light of the foregoing factors, the NYISO has concluded that it needs to work with stakeholders through its usual shared governance process, rather than through a Section 206 filing or other means, to develop a solution to the issues identified here. Bypassing this process would create unnecessary controversy and could result in otherwise avoidable litigation before the Commission.

The NYISO discussed this plan with its stakeholders at the December 21, 2016 MIWG meeting. The NYISO provided an initial proposal for stakeholder consideration that would extend the graduated Transmission Shortage Cost to all transmission facilities with a non-zero CRM value and modify the second pricing value of the graduated Transmission Shortage Cost.²³ The NYISO is working on an expedited basis to obtain the necessary stakeholder approval for a Section 205 filing and submit it to the Commission by April 30, 2017. If the NYISO is unable to meet this schedule, it will instead submit a status report on its efforts.

The NYISO will also work with stakeholders to explore potential longer-term enhancements to transmission constraint pricing, which could include the development of more constraint-specific pricing values. The NYISO has included a project in its 2017 schedule to address this issue. Given the complex nature of the issues, the difficulty of developing

²³ NYISO, *Transmission Constraint Pricing* (presented at the December 21, 2016 MIWG meeting), available at: http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2016-12-21/Transmission%20Constraint%20Pricing%20Update%2012212016%20MIWG%20FINAL.pdf.

substantial software changes, and the need for stakeholder input, this will necessarily be a lengthy process.

III. Request for Waiver

The Commission has granted waivers of tariff provisions where: (1) the applicant acted in good faith; (2) the waiver is of a limited scope; (3) a concrete problem needs to be remedied; and (4) the waiver will not have undesirable consequences, such as harming third parties.²⁴ The NYISO's waiver request meets each of these criteria. Consequently, the Commission should grant a waiver of Sections 17.1.1 and 17.1.4 of the Services Tariff as they relate to the NYISO's transmission constraint pricing and the definition of "Transmission Shortage Cost" in Section 2.20 of the Services Tariff to address the inconsistencies between the NYISO's tariff and software regarding transmission constraint pricing for the period from February 11, 2016 until the Services Tariff is revised to resolve it.

As described above, the NYISO has concluded that proceeding outside its normal shared governance stakeholder process would not be appropriate under the circumstances. Merely changing the software to better align with the current tariff provisions would not fully resolve the issues with the current tariff language. Moreover, broadening the application of the graduated Transmission Shortage Cost rules to all transmission facilities with a non-zero CRM value without further review of the appropriateness of second price value of \$2,350/MWh in certain instances could result in unreasonable pricing outcomes and unwarranted consumer cost impacts. Accordingly, the NYISO submits that continuing to use the current software until revisions to the

²⁴ See, e.g., *Midcontinent Indep. Sys. Operator, Inc.*, 154 FERC ¶ 61,059, at P 14; (2016); *Calpine Energy Servs., L.P.*, 154 FERC ¶ 61,082, at P 12 (2016); *N.Y. Power Auth.*, 152 FERC ¶ 61,058, at P 22 (2015).

Services Tariff and software can be developed with appropriate analysis and stakeholder review is preferable to any interim measures that may be available.

First, the NYISO has acted in good faith. With respect to the treatment of facilities with a zero CRM value, although the logic of applying only the single \$4,000/MWh Shadow Price cap is not expressly described in the tariff, this is consistent with the structure of the graduated Transmission Shortage Cost. Stakeholders appear to agree that this is consistent with the proposal as described during the stakeholder process to approve the current graduated Transmission Shortage Cost. Nevertheless, the NYISO now recognizes that it did not adequately explain to stakeholders the pre-existing software logic for resolving infeasible transmission constraints and the interaction of this logic with the graduated Transmission Shortage Cost.

Furthermore, the NYISO has worked diligently to address the MMU's concerns regarding the implementation of the graduated Transmission Shortage Cost. The NYISO has acted transparently, and in full compliance with its Notice of Market Problem rules, to provide notice of the issue, conduct analyses, keep stakeholders informed, and explore potential improvements. The NYISO is working in close coordination with stakeholders to eliminate the inconsistency between the transmission constraint pricing software and the relevant tariff language.

Second, the requested waiver is of limited duration and scope. It would apply for a relatively short time – from February 11, 2016 until the Services Tariff can be revised and necessary software revisions implemented. As noted above, the NYISO has developed a schedule for obtaining stakeholder approval of the necessary tariff revisions to resolve the current inconsistency between the software and tariff and submitting a filing to the Commission

on or before April 30, 2017. If the NYISO is unable to make a filing by this date, it will submit a status report to the Commission to describe its progress.

Third, the requested waiver is necessary to remedy a concrete problem. Prices calculated using the NYISO's software are different in some instances than they would be if the graduated Transmission Shortage Cost was applied to all transmission constraints. For the near future, as explained above, the NYISO believes that it is reasonable and appropriate to continue to use the current transmission constraint pricing software until appropriate tariff and software revisions can be developed in consultation with stakeholders.

Making immediate software changes simply to align with the current tariff language would introduce additional market uncertainty into this already complex matter. Therefore, the Commission should grant the requested waiver until such time as the tariff revisions and software modifications necessary to address the issue have been implemented.

For past periods, the NYISO is not permitted to correct prices that have not been reserved within prescribed timeframes, except as may be directed by the Commission.²⁵ The price correction procedures and deadlines prescribed in Attachment E of the Services Tariff are designed to provide market certainty and confidence as to the finality of market outcomes and avoid untimely retroactive price corrections. Therefore, the Commission should not direct the NYISO to recalculate previously calculated prices.

It is not possible to accurately determine what market outcomes *would have* been but for the tariff-software inconsistency at issue. As the Commission has recognized, ISO/RTO markets generally cannot be "re-run" to accurately "correct" results from prior periods. This is because

²⁵ See Service Tariff, Section 20.3. Erroneous prices not reserved and corrected within specified timeframes cannot be corrected by the NYISO except as directed by the Commission or a court of competent jurisdiction.

doing so would require making assumptions about how market participants would have acted under different market conditions than those that actually existed.²⁶

In this instance, the MMU has indicated that the inconsistency between the tariff and software results in higher Shadow Prices in certain circumstances which, among other things, led to higher congestion costs and increased real-time volatility.²⁷ These factors were part of the prevailing market conditions in which market participants operated and made decisions. It is not possible to accurately determine how market participants would have behaved if conditions had been different or how others would have reacted in turn to those changes. In short, it is not possible to accurately recreate market outcomes that assume a different implementation of the graduated Transmission Shortage Cost. Even if it were possible to do so, that could introduce a different set of undesirable pricing outcomes as discussed herein.

Given the inherent inaccuracy and potentially adverse consequences of attempting to recalculate prices, the Commission has previously found that it was reasonable “to make only those settlement corrections that can be determined with a degree of accuracy and do not have unintended, and adverse, market consequences, including unsettling expectations.”²⁸ The Commission has also previously held that even “rough justice” recalculations are not appropriate

²⁶ See *New York Independent System Operator, Inc.*, 115 FERC ¶ 61,026 at P 55 (2006) (“any attempt to recalculate the market-clearing prices in this case would be mere conjecture as to what market participants’ bidding behavior might have been under different circumstances, with little evidence to support such conjecture.”).

²⁷ See Potomac Economics, *MMU Assessment of the Graduated Transmission Demand Curve Implementation* (presented at the November 3, 2016 MIWG meeting) at Slide 7, available at: http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2016-11-03/Evaluation%20of%20Potential%20Market%20Problem%20by%20MMU_11-02-2016_final.pdf.

²⁸ *New York Indep. Sys. Operator, Inc.*, 129 FERC ¶ 61,217 at P 48 (2009); quoting *New York Indep. Sys. Operator, Inc.*, 115 FERC ¶ 61,026 at P 59 (2006).

when there is no confidence that they would at least be reasonably accurate.²⁹ The Commission should follow this precedent in this proceeding because reasonably accurate recalculations are not feasible and attempting to make them likely would be disruptive and harmful.

Finally, the waiver will not harm third parties or have other undesirable consequences. To the contrary, it will promote market certainty and avoid undesirable pricing outcomes that would otherwise result in certain circumstances. Applying the graduated Transmission Shortage Cost precisely as it is currently described in the tariff could produce undesirable outcomes in certain circumstances that would harm consumers.

²⁹ *New York Indep. Sys. Operator, Inc.*, 129 FERC ¶ 61,217 at P 48 (2009) (“[W]e find that although NYISO and its stakeholders engaged in serious attempts at determining appropriate restitution, due to the many interrelated market impacts of the PAR modeling error that are not capable of realistic estimation, determining reasonable “rough justice” restitution amounts is not possible. Consequently, the Commission will not require NYISO to make restitution for the PAR modeling error.”)

IV. Conclusion

WHEREFORE, for the foregoing reasons, the NYISO respectfully requests that the Commission grant its requested waiver of Sections 17.1.1 and 17.1.4 of the Services Tariff as they relate to the NYISO's transmission constraint pricing and the definition of "Transmission Shortage Cost" in Section 2.20 of the Services Tariff. The waiver would apply from February 11, 2016 until tariff revisions and software modifications are in place that provide a complete description of the NYISO's transmission constraint pricing rules and resolve the inconsistency between the NYISO's software and its tariff.

Respectfully submitted,

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