

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Managing Transmission Line Ratings

Docket No. ER22-2350-000

**MOTION FOR EXTENSION OF TIME TO COMPLY
OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.**

Pursuant to Rules 212 and 2008 of the Rules of Practice and Procedure promulgated by the Federal Energy Regulatory Commission (“FERC” or “Commission”),¹ the New York Independent System Operator, Inc. (the “NYISO”) respectfully submits this *Motion for Extension of Time to Comply* (“Motion”) with implementing the requirements of Order No. 881 and Order No. 881-A (collectively referred to herein as “Order No. 881”) issued by the Commission² and the NYISO’s compliance plan relating thereto.³ For the reasons described herein, and supported by the attached affidavit of Rana Mukerji, NYISO’s Senior Vice President of Market Structures,⁴ the NYISO requests an extension until December 31, 2028 to implement the revisions proposed in its July 12, 2022 and June 20, 2023 compliance filings and accepted by the Commission in its April 20, 2023 and November 22, 2023 orders in this docket (the “April 2023 Order” and “November 2023 Order,” respectively, and referred to herein as the “Compliance Filing Orders”).⁵

¹ 18 C.F.R. §§ 385.212 and 385.2008 (2023).

² *Managing Transmission Line Ratings*, Order No. 881, 87 Fed. Reg. 2244 (January 13, 2022), 177 FERC ¶ 61,179 (2021) (“Order No. 881”), *Order Addressing Arguments Raised on Rehearing and Clarification*, Order No. 881-A, 179 FERC ¶ 61,125 (2022) (“Order No. 881-A”).

³ See *New York Independent System Operator, Inc.*, Filing in Compliance with Order No. 881, Docket No. ER22-2350-000 (July 12, 2022) and *New York Independent System Operator, Inc.*, 183 FERC ¶ 61,036 (April 20, 2023).

⁴ The affidavit of Rana Mukerji is submitted as Attachment A to this Motion.

⁵ See *New York Independent System Operator, Inc.*, 183 FERC ¶ 61,036 (April 20, 2023) and *New York Independent System Operator, Inc.*, Office of Energy Market Regulation Order, Docket No. ER22-2350-001

(continued...)

In addition, as the Transmission Owners (“TOs”) in the New York Control Area (“NYCA”)⁶ will not be able to implement their Order No. 881 requirements until NYISO has in place the software and protocols that are necessary to integrate such changes and compliance efforts into NYISO’s systems and markets, these TOs have authorized NYISO to request on their behalf that the Commission provide them an extension of time to implement the requirements of Order No. 881 until the date the NYISO implements its Order No. 881 compliance plan.

The extension is required to allow time for hardware and software upgrades that must occur prior to the NYISO’s implementation of Order No. 881’s directives in order to maintain electric system reliability throughout the NYCA and to protect the efficient operation of the NYISO-administered wholesale markets. In 2023, the NYISO was engaged in the early stages of a project to replace the hardware and software that supports the Energy Management System (“EMS”) and the Business Management System (“BMS”), *i.e.*, the EMS/BMS technologies upgrade project. The EMS/BMS platforms comprise the hardware and software that run the NYISO’s wholesale markets, including the financial reservation transmission model, and monitor and support the reliability of the bulk electricity grid. As explained in the attached affidavit of Rana Mukerji, the NYISO’s compliance plan for Order No. 881 requires fundamental changes to the same key applications in the EMS and BMS software suite that are impacted by the EMS/BMS technologies upgrade project. It is not feasible to simultaneously undertake implementation of Order No. 881 and the EMS/BMS technologies upgrade. However, the NYISO respectfully emphasizes that certain dynamic line rating (“DLR”) functionality is in

(November 22, 2023).

⁶ The TOs in the NYCA are: Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., Niagara Mohawk Power Corporation d/b/a National Grid, New York Power Authority, New York State Electric & Gas Corporation, Orange and Rockland Utilities, Inc., Long Island Power Authority, Rochester Gas and Electric Corporation, NextEra Energy Transmission New York, Inc., LS Power Grid New York Corporation I, and New York Transco LLC.

place today and will remain available for the TOs to modify transmission line ratings in real-time, when appropriate, while the NYISO develops the software enhancements necessary to fully implement Order No. 881.

Thus, as discussed below, there is good cause for granting the requested extension because it is necessary to allow the NYISO to sequence two critical projects in a manner that protects the integrity of the wholesale markets and supports electric system reliability.

I. BACKGROUND

A. Order No. 881 and the NYISO's Compliance Filings

Order No. 881 requires Regional Transmission Organizations (“RTOs”)/Independent System Operators (“ISOs”) to work with TOs to implement ambient-adjusted ratings (“AARs”) on the transmission lines over which they provide transmission service. An AAR is a transmission line rating that applies to a time period of not greater than one hour, reflects an up-to-date forecast of ambient air temperature across the time period to which the rating applies, incorporates an adjustment for daytime/nighttime solar heating, and is calculated at least each hour. RTOs/ISOs are responsible for implementing the systems and procedures necessary to allow TOs to electronically update transmission line ratings at least hourly. RTOs/ISOs must also maintain a database of their TOs’ transmission line ratings and methodologies on their OASIS site or another password-protected website.

On July 12, 2022, the NYISO submitted proposed revisions to its Open Access Transmission Tariff (“OATT”) in response to the directives of Order No. 881 (“July 2022 Compliance Filing”). The July 2022 Compliance Filing outlined the NYISO’s proposal to add Attachment GG to its OATT in response to the *pro forma* OATT revisions adopted in Order No. 881. The NYISO’s proposed compliance approach included a number of variations from the *pro forma* OATT to conform the revisions directed by Order No. 881 to the NYISO’s existing,

Commission-approved financial reservation transmission model and market issues unique to the NYISO. The July 2022 Compliance Filing was accepted in part and rejected in part.⁷ Relevant here, the NYISO’s proposal to add Attachment GG to its OATT to implement the requirements of Order No. 881 was accepted by the Commission, subject to further compliance filings.⁸

B. The NYISO’s Financial Transmission Service Model and Market Software

As discussed in the July 2022 Compliance Filing, the NYISO utilizes a financial reservation transmission model that differs substantially from the “physical reservation” transmission model contemplated by the Order Nos. 888 and 890 *pro forma* OATT.⁹ The Commission has consistently found that these variations from the *pro forma* OATT are “consistent with or superior to the *pro forma* OATT” and issued orders accepting NYISO-specific OATT language or waiving certain requirements.¹⁰ Since 1999, the Commission has approved substantial revisions to the NYISO OATT to reflect those fundamental differences, specifically to reflect the fact that the NYISO effectively offers a single form of financial

⁷ *New York Independent System Operator, Inc.*, 183 FERC ¶ 61,036 (April 20, 2023). The July 2022 Compliance Filing also proposed revisions to OATT Attachment M, OATT Attachment N, and certain rate schedules in the NYISO OATT, which were rejected by the April 2023 Order as outside the scope of Order No. 881 and are not relevant to this Motion.

⁸ At the time this Motion is submitted, the NYISO has an outstanding compliance filing obligation due by November 12, 2024. The NYISO submitted the first of two required further compliance filings on June 20, 2023, and the Commission issued an order accepting this compliance filing on November 22, 2023.

⁹ See *New York Independent System Operator, Inc.*, 123 FERC ¶ 61,134 (2008), at PP 8-13; *New York Independent System Operator, Inc.*, Letter Order on Compliance Filing, Docket No. OA08-13-003 (November 12, 2008); *New York Independent System Operator, Inc.*, Compliance with Order No. 890, Docket No. OA08-13-000 (April 11, 2008); *New York Independent System Operator, Inc.*, Compliance Filing, Docket No. OA08-13-000 (October 11, 2007).

¹⁰ See, e.g., *New York Independent System Operator, Inc.*, 123 FERC ¶ 61,134 at P 13 (2008), *New York Independent System Operator, Inc.*, 125 FERC ¶ 61, 274 at P 13 (2008), and *New York Independent System Operator, Inc.*, 185 FERC ¶ 61,067 at PP 10-11 (2023).

reservation-based transmission service within a framework of Locational Based Marginal Pricing (“LBMP”)¹¹ and continuous economic redispatching.¹²

Firm transmission service within the NYCA is scheduled “implicitly” when customers receive Energy schedules from the NYISO. The NYISO does not accept or facilitate express reservations of physical transmission service within the NYCA. The NYISO awards firm transmission service to Resources and External Transactions committed economically through the Energy market. Unlike markets that rely on “physical” (MW) reservations of ramp and transfer capability, the NYISO does not permit Market Participants to pre-reserve ramp or transfer capability. In the NYISO’s Day-Ahead Market (“DAM”) and Real-Time Market (“RTM”) software, internal New York generation resources and External Transactions (Imports, Exports and Wheels-Through) compete to be economically awarded an Energy schedule, including the necessary transmission service and ramp schedule. All desired uses of the transmission system are scheduled to the extent that customers are willing to pay congestion charges (some of which can be hedged using financial rights referred to as Transmission Congestion Contracts). This approach directly incorporates expected transmission system congestion and transmission service into the market software evaluations and permits the NYISO to meet its demand obligations at the lowest production cost based on the bids submitted.

¹¹ Capitalized terms that are not otherwise defined in this submission shall have the meaning specified in the NYISO’s OATT or its Services Tariff.

¹² See, e.g. *Central Hudson Gas & Elec. Corp.*, 86 FERC ¶ 61,062 (1999) and *Central Hudson Gas & Elec. Corp.*, 88 FERC ¶ 61,138 (1999). See also *New York Independent System Operator, Inc.*, 123 FERC ¶ 61,134 at P 13 (2008) (conditionally approving the NYISO’s Order No. 890 compliance filing and acknowledging the substantial differences between the NYISO’s tariffs and the *pro forma* OATT related to the NYISO’s use of a financial reservation model). The Commission also recognized that many ISOs and RTOs administer markets that differ substantially from the model of the *pro forma* OATT and noted that the Commission did not intend to “upset” those market designs.

The twenty-four-hour Day-Ahead optimization and the real-time look-ahead tool both schedule resources and external interchange while considering transmission constraints based on the transmission limits presented to the software at the time the look-ahead tool runs. The DAM and the RTM look-ahead runs utilize the entire transmission system capability presented to the software, including any DLR adjustments requested by a TO to schedule economic interchange or transfers from other parts of the system as components of its least cost mix of Ancillary Services and Energy from Suppliers. Upon implementation of Order No. 881, the NYISO's market software would also account for the AARs provided by the TOs. Therefore, AARs must be programmatically incorporated into the Day-Ahead Security Constrained Unit Commitment ("SCUC"), Real-Time Commitment ("RTC"), and Real-Time Dispatch ("RTD") software used to develop schedules and prices for the NYISO's Energy and Ancillary Services markets.

C. The Order 881 Project and EMS/BMS Update Project

In early 2023, the NYISO commenced an effort to identify the software systems that would need to be modified to support implementation of Order No. 881 and to document the requirements necessary to support the significant software changes that Order No. 881 requires ("Order 881 Project"). The Order 881 Project identified requirements to modify nine different NYISO software applications, many of which are integral to running the wholesale energy markets efficiently and operating the bulk electricity grid reliably, including the SCUC, RTC, and RTD software. At the same time and in parallel with the Order 881 Project, the NYISO was engaged in the early stages of its EMS/ BMS technologies upgrade project. This project is slated to replace the hardware and operating system that supports the EMS/BMS platform with upgraded vendor-supported operating systems to facilitate the continued round-the-clock reliable operation of the electric system.

The EMS/BMS platforms comprise the hardware and software that run the NYISO's wholesale Energy markets and monitor and maintain the reliability of the bulk electricity grid. NYISO's system operators utilize the EMS to monitor the reliable operation of the grid and for situational awareness. It includes, among other functionality, applications that monitor load flows and perform contingency analyses, such as security monitor, state estimator, outage monitoring, and automatic generation control. The BMS is a suite of applications that comprise the SCUC, RTC, and RTD software used to develop schedules and prices for the NYISO's Energy and Ancillary Services markets. The existing EMS/BMS platforms are critical to maintaining functional systems twenty-four hours a day, seven days a week. Third-party vendors provide critically necessary support for the operation of the EMS/BMS platforms. Vendor support provides industry-wide security patches fundamental to the software systems and the security of the grid. Vendor support also provides urgent fixes to address identified software operational issues in addition to technical support for NYISO specific issues.

The early stages of the EMS/BMS technologies upgrade project revealed that the project, which was initially expected to be complete by the end of 2023, would require multiple years to complete. This upgrade project requires the NYISO's immediate focus and must be completed prior to continuing efforts to implement Order No. 881. The operating systems that the NYISO's EMS/BMS platform runs on will reach end of life in 2024, and extended vendor support will end in June 2026. As described in the attached affidavit of Rana Mukerji, the NYISO cannot use these operating systems past the end of extended vendor support without risking significant reliability and efficiency issues to the operation of the bulk electricity grid. For the NYISO to move forward with an upgrade to a vendor-supported operating system, the NYISO must make

modifications to the existing Network Manager (“NM”) platform,¹³ which is a multi-year effort to effectuate. Due to changes in the upgraded operating systems, key applications in the EMS and BMS software suite require software changes to properly function on the upgraded operating systems. Modifying these key applications was not anticipated as part of the initial scope for this technology upgrade project and resulting project schedule. The required changes to the EMS and BMS applications to facilitate the transition to the upgraded operating systems has significantly expanded the overall scope and timeline for completion of this required technology upgrade. Once the vendor provides updated EMS/BMS software, it will require full regression testing by NYISO staff, including a parallel testing phase with the existing system to ensure consistency of power system reliability and energy market outcomes prior to implementation of the updated software. Factoring in this significant expansion in scope, the NYISO now expects the EMS/BMS technologies upgrade project to be completed in 2025 (*i.e.*, prior to the end of vendor support for the current operating systems in mid-2026).¹⁴

II. MOTION FOR EXTENSION OF TIME TO COMPLY WITH ORDER NO. 881

The NYISO respectfully requests an extension of time to implement the revisions proposed in its July 2022 Compliance Filing, as accepted by the Commission’s April 2023 Order and subject to the further compliance filings referenced above. The extension is required to allow for the completion of hardware and software upgrades associated with the EMS/BMS Project that will be necessary to maintain electric system reliability throughout the NYCA and to protect the efficient operation of the NYISO-administered wholesale markets as the NYISO moves to fully implement Order No. 881.

¹³ Network Manager (“NM”) is the NYISO software and hardware platform that integrates and facilitates the operation of the EMS and BMS platforms.

¹⁴ See Affidavit of Rana Mukerji at P 8.

The implementation of the Commission-accepted compliance plan for Order No. 881 requires fundamental changes to the same key applications in the EMS and BMS software suite that are impacted by the requirements of the EMS/BMS technologies upgrade project. Therefore, the same resources and personnel (for both the NYISO and its EMS/BMS vendor) would be required to address both software development efforts. As described in the attached affidavit of Rana Mukerji, reallocating any personnel resources away from the EMS/BMS technologies upgrade project, including the NM platform modifications, would jeopardize the timeline and quality assurance efforts required to successfully complete a critically important technology upgrade that is foundational to the continued reliable and efficient operation of the bulk electricity grid in New York.

Additionally, it is not feasible to undertake efforts to simultaneously modify the NM platform for the implementation of Order No. 881 and the fundamental changes required as part of the EMS/BMS technologies upgrade. Coding two sets of major modifications in parallel within the same systems significantly increases the complexity of the required testing, introduces the possibility of complications and interactions that could result in failed operation of both sets of changes, and would significantly extend the required timeline for development and implementation of the required software changes for both efforts. Such an effort would ultimately delay implementation of the fundamental changes prerequisite to upgrading the operating systems for the EMS and BMS beyond the end of vendor support for the current operating systems in June 2026. A similar delay would also result for the implementation of the requirements of Order No. 881.

Even if the NYISO was able to successfully develop software revisions to implement the Order No. 881's requirements that worked with the existing NM platform and EMS/BMS

software suite, such software enhancements would not be ready for deployment until 2025 (*i.e.*, after the existing hardware and operating systems on which the EMS/BMS software suite runs have reached their end of life in 2024). As the EMS/BMS technologies upgrade project progressed to completion, any such initial software to implement Order No. 881 would be incompatible with the new EMS/BMS platform, and the NYISO would have to immediately endeavor to develop new software to implement the requirements of Order No. 881 within the upgraded EMS/BMS software suite. Such an effort would jeopardize the stability of the hardware and software systems, risk periods of noncompliance with Order No. 881, be duplicative in nature, and significantly increase the cost and resources necessary to implement Order No. 881. Considering the magnitude of the overall effort for NYISO to comply with Order No. 881, as accepted by the Commission in the Compliance Filing Orders, the NYISO considered whether discrete pieces of the overall compliance plan could effectively be accomplished in parallel with the EMS/BMS technologies upgrade project and put in place by July 2025.

After an extensive review of the requirements documented in the Order 881 Project, all components of the NYISO's Order No. 881 compliance plan intersect with the NM platform. Undertaking any components of the compliance plan at this time would jeopardize the timely success of the EMS/BMS technologies upgrade project as well as any components of the Order No. 881 compliance plan undertaken. With that said, as discussed further below, the NYISO's software already has in place DLR functionality that allows TOs to modify transmission line ratings in real-time, when appropriate.

After the completion of the critical EMS/BMS technologies upgrade project, the NYISO will promptly allocate resources back to development of the software enhancements necessary to

implement Order No. 881. The NYISO intends to undertake the development of functional requirements, software design, and software development for Order No. 881 in 2026 and 2027 to facilitate the implementation of such software enhancements in 2028. As discussed in the attached affidavit of Rana Mukerji, the NYISO always expected to require approximately two-and-a-half years to implement its Order No. 881 compliance plan, *i.e.*, from early 2023 to the second half of 2025. After extensive review of the software project required to implement the Order No. 881 requirements within the upgraded EMS/BMS software suite, the NYISO continues to estimate two-and-a-half to three years of effort to complete and implement the project. Therefore, the NYISO respectfully requests that the Commission extend the deadline for implementing its Order No. 881 compliance plan until a to-be determined date no later than December 31, 2028.¹⁵ The NYISO also respectfully requests that the Commission extend the due date of the further compliance filing required by the April 2023 Order until December 31, 2027.¹⁶ As demonstrated herein, good cause exists to grant this extension consistent with prior Commission decisions.¹⁷

III. DYNAMIC LINE RATING FUNCTIONALITY REMAINS AVAILABLE

As the NYISO develops the software enhancements necessary to implement Order No. 881, the NYISO respectfully reiterates that certain DLR functionality is in place today and will remain available for the TOs to modify transmission line ratings in real-time, when appropriate.

¹⁵ As explained at the beginning of this Motion, the NYISO is also requesting, with the authorization of the TOs, that the TOs in the NYCA be provided an extension of time to comply with Order No. 881 until the date the NYISO implements its Order No. 881 compliance plan.

¹⁶ The April 2023 Order directed the NYISO to submit a further compliance filing no later than November 12, 2024. *See* Ordering Paragraph (C) of the April 2023 Order. Given the NYISO's requested extension herein to implement the Commission-approved requirements for Order No. 881, the NYISO requests an extension to submit this further compliance filing.

¹⁷ *See New York Independent System Operator, Inc.*, Notice of Extension of Time, Docket No. ER21-2460-004 (December 1, 2022).

TOs may use the existing DLR functionality to increase or decrease real-time line ratings for any reason they deem appropriate, including ambient temperature, consistent with Good Utility Practice. Historically, these adjustments have been made to increase the ratings used in real-time based on ambient conditions. A majority of the bulk electric system equipment in New York is able to be rated using DLRs.

The existing DLR functionality allows TOs to submit updated line ratings to the NYISO via the Inter-control Center Communications Protocol (“ICCP”) secure communications tool. Accepted DLR data is used in the RTM commitment and dispatch solutions until the rating is further updated or removed by the TO. Consistent with paragraph 255 of Order No. 881, the NYISO will maintain the systems and procedures necessary to allow TOs to electronically update transmission line ratings in the RTM by submitting such data to the NYISO using the existing DLR functionality.

IV. REQUEST FOR ACTION

The NYISO respectfully requests that the Commission grant this Motion by March 29, 2024. In April 2024, the NYISO will commence its 2025 project prioritization process. The project prioritization process is a multi-month effort among the NYISO and its stakeholders to determine what projects will be undertaken in the following calendar year. Commission action on this Motion prior to the start of the 2025 project prioritization process will provide the NYISO and its stakeholders with the certainty necessary to proceed confidently with the EMS/BMS technologies upgrade project.

V. COPIES OF CORRESPONDENCE

Correspondence concerning this filing should be served on:

Robert E. Fernandez, Executive Vice President, General Counsel, and
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VI. CONCLUSION

The NYISO respectfully requests that the Commission grant this *Motion for Extension of Time to Comply* to allow the NYISO to timely complete its critical EMS/BMS technologies upgrades prior to implementing the requirements of Order No. 881.

Respectfully submitted,

NEW YORK INDEPENDENT SYSTEM
OPERATOR, INC.

/s/ James H. Sweeney
James H. Sweeney, Senior Attorney

Dated: January 30, 2024

cc: Janel Burdick
Emily Chen
Matthew Christiansen
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Jaime Knepper
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Douglas Roe
Eric Vandenberg

Attachment A

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

New York Independent System Operator, Inc.)))	Docket No. ER22-2350-000
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AFFIDAVIT OF RANA MUKERJI

1. My name is Rana Mukerji. I am currently the Senior Vice President of Market Structures for the New York Independent System Operator, Inc. (“NYISO”). My business address is 10 Krey Boulevard, Rensselaer, NY 12144. I received a Master of Science Degree in Electric Power Engineering and a Master of Business Administration from Rensselaer Polytechnic Institute in Troy, New York. I am also a registered Professional Engineer in New York State.
2. I have led the Market Design and Product and Project Management activities at the NYISO, as the responsible Corporate Officer, for over seventeen (17) years.
3. As the NYISO’s Senior Vice President of Market Structures, I have responsibility for designing, improving, and implementing the NYISO’s Energy, Capacity, Ancillary Services, and Enterprise products. My responsibilities include Product and Project Management functions for integrating new resource technologies into the NYISO’s wholesale market structures; research and development of mathematical models for use in developing and implementing market designs; and achieving compliance with applicable reliability rules, the ISO Tariffs, Federal Energy Regulatory Commission (“Commission”) orders, and any applicable New York Public Service Commission orders or requirements.

4. The purpose of this Affidavit is to confirm, to the extent necessary, the facts set forth in the NYISO's January 30, 2024 Motion for Extension of Time to Comply of the New York Independent System Operator, Inc. ("NYISO Motion").
5. In my capacity as Senior Vice President, I oversee the NYISO's project prioritization process and the associated allocation of resources to fulfill project needs. I oversaw the NYISO's development of the project plan to execute the Energy Management System ("EMS")/Business Management System ("BMS") technologies upgrade project ("EMS/BMS technologies upgrade project"), the NYISO's 2023 Order No. 881 Project, and development of the plan to complete the NYISO's Order No. 881 compliance effort.
6. Members of my staff and I worked on the NYISO's Order No. 881 Project in early 2023 to identify the software systems that would need to be modified to support implementation of Order No. 881 and to document the software modifications that Order No. 881 requires. The Order No. 881 Project identified requirements to modify nine different NYISO software applications, many of which are integral to running the wholesale energy markets efficiently and operating the bulk electricity grid reliably, including the Day-Ahead Security Constrained Unit Commitment ("SCUC"), Real-Time Commitment ("RTC"), and Real-Time Dispatch ("RTD") software.
7. In parallel with the Order No. 881 Project, my staff and I were engaged in the early stages of the EMS/ BMS technologies upgrade project. This project is slated to replace the hardware and operating system that supports the EMS/BMS platform with upgraded vendor-supported operating systems to facilitate the continued round-the-clock reliable operation of the electric system. The operating systems that the NYISO's EMS/BMS platform runs on will reach end of life in 2024, and extended vendor support will end in

June 2026. NYISO cannot use these operating systems past the end of vendor support without risking significant software failures. NYISO's system operators utilize the EMS to monitor the reliable operation of the grid and for situational awareness. The BMS is a suite of applications that comprise the SCUC, RTC, and RTD software used to develop schedules and prices for the NYISO's Energy and Ancillary Services markets.

8. Members of my staff and I participated in the evaluation of other software modifications that are necessary to move forward with an upgrade to a vendor-supported operating system, including changes to the existing Network Manager ("NM") platform that integrates and facilitates the operation of the EMS and BMS platforms. Modifying other key applications was not anticipated as part of the initial scope for this technology upgrade project and the initial project schedule. As a result, the timeline to complete the EMS/BMS technologies upgrade project was extended from 2023 to 2025.
9. The NYISO's compliance plan for Order No. 881 requires fundamental changes to the same key applications impacted by the EMS/BMS technologies upgrade project.
10. Based on my experience with software projects and NYISO's software systems, coding two sets of major modifications in parallel within the same systems significantly increases the possibility that one or both software changes result in increased implementation times and errors that lead to an impacted software application failing to run as designed. At the same time, reallocating any personnel resources away from the EMS/BMS technologies upgrade project, including the NM platform modifications, would jeopardize the project timeline and quality assurance efforts.
11. The NYISO's project plan always allocated approximately two-and-a-half years to implement its Order No. 881 compliance plan, *i.e.*, from early 2023 to the second half of

2025. After extensive review by members of my staff and me, the NYISO continues to estimate two-and-a-half to three years of effort to complete and implement the project.

12. With regard to the NYISO Motion, I provided guidance on the timeline and staffing requirements to complete the EMS/BMS technologies upgrade project and the NYISO's Order No. 881 compliance plan.

13. I have reviewed the facts stated in the NYISO Motion, and I have personal knowledge of and helped develop the factual statements contained in the NYISO Motion. The factual statements set forth in the NYISO Motion are true and correct to the best of my information, knowledge, and belief.

14. This concludes my affidavit.

Executed on this 30th day of January, 2024.

Rana Mukerji

Rana Mukerji
Senior Vice President, Market Structures
New York Independent System Operator, Inc.
10 Krey Boulevard
Rensselaer, New York 12144

Pamela J Mead

Pamela Mead
Notary Public, State of New York

My Commission Expires: 6/24/26



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 Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 30th day of January 2024.

/s/ Stephanie Amann

Stephanie Amann
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